OBSERVATIONS ON SOME AUSTRALIAN FOREST INSECTS

23. A REVISION OF THE GENUS *GLYCASPIS* (HOMOPTERA: PSYLLIDAE) WITH DESCRIPTIONS OF SEVENTY-THREE NEW SPECIES

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(Figures 1-144)

SUMMARY

The taxonomy, phylogeny, and host associations of *Glycaspis* species, based on an Australia-wide survey, are reviewed, and 73 new species are described and figured. Four new species synonyms and a subgenus synonym are recorded.

The genus now contains 127 species, in three subgenera. The most primitive subgenus consists of 36 spp. which are associated with the renantherous *Eucalyptus* spp. of Blakely (1955); the intermediate subgenus contains 79 spp. which are associated with the non-renantherous *Eucalyptus* spp.; and there are 12 spp. associated with *Melaleuca* spp. and *Tristania conferta* in the most recent subgenus.

The genus is distributed throughout and beyond Australia, to the Philippine Islands.

The subgenus *Alloglycaspis* (Moore 1961) becomes a junior synonym of the subgenus *Glycaspis* which now contains those species previously assigned to *Alloglycaspis*. A new subgenus is erected to contain those species previously assigned to the former subgenus *Glycaspis*.

Because of limited early knowledge concerning the genus, descriptions by Dobson, Froggatt, Schwarz and Solomon were based on unsatisfactory characters. Illustrations based on slide preparations of the male genitalia are now considered to be essential for the separation of male specimens of the various species. Morphological characters suitable for separating females of species have not been determined.

Methods used to collect, prepare and describe specimens are given. To recognise, and correctly interpret previously described species, attempts were made to obtain these species from their type-localities, and comments are presented under the relevant species.

INTRODUCTION

Papers published by Dobson (1851), Schwarz (1898), Froggatt (1900, 1901, 1903) and Solomon (1936) indicated that species of the genus *Glycaspis* Taylor, 1960 were distributed throughout Australia, and that they were known to occur only on *Eucalyptus* spp. *Melaleuca* spp. and *Tristania conferta* were later determined to be hosts, and the known distribution of the genus was extended beyond Australia (Moore 1964b).

To examine the taxonomy, distribution and host associations of the Australian species, a limited collecting project in each State was made from April 1966 to March 1967. Collecting in discrete areas was limited to short periods during this project, while distance, time, weather conditions, the particular season then experienced in a locality, or the physiological condition of host plants, imposed further limitations, so that it is assumed that a number of *Glycaspis* spp. yet remains to be collected and described. The presence or absence of certain species was evident when collecting in various discrete areas, e.g. at Perth, W.A., where *G. occidentalis,* which constructs round lerps, was not obtained from its host *E. gomphocephala,* although another species which constructs rectangular lerps on this host, was consistently obtained.

Some 190 *Eucalyptus* spp., have been sampled for *Glycaspis* spp. and a *Glycaspis*/host association established for about 133 spp. during, and prior to, this project.

METHODS

Collecting

The foliage of possible host plants was extensively swept with an entomological hand net of calico or similar material, collections being made from a host species in numerous widely separated localities when possible, to determine any variation in a discrete species of *Glycaspis* throughout its known range.

For purposes of host identification, epicormic growth or low branches of trees bearing seed capsules, were sampled for *Glycaspis* spp. when possible, so that samples of coppice or small regeneration not bearing seed capsules might be minimised, although at times it was necessary to procure samples of such material.

Adults obtained in the net were collected in 2 x ½" specimen tubes each containing a basal plug of cottonwool saturated with ethyl acetate, into which they readily sprang from the sides of the net. These specimens were then transferred to tubes of the same size containing 90% alcohol, and conveyed in wooden boxes each holding 100 tubes. Specimens from each locality and/or each host, were placed in separate tubes with relevant data. Between each box, rubber ball-and-cup separators were fitted to eliminate vibration and jolting.

Collection of botanical material was essential for the identification of the *Eucalyptus, Melaleuca* and *Tristania* spp., and so that the host specificity of each *Glycaspis* species could be examined; but because of the limited space available for conveyance, it was not possible to sample all foliage from which *Glycaspis* spp. were obtained. Such eucalypt species as *tetrodonta, miniata, phoenicea, tetraptera,* etc. were determined *in situ* by the writer; many species not so clearly defined, presented the problem of limitation of host sampling. Only those host species the identification of which did not remain in doubt, or those identified by the relevant State botanist, have been recorded without a query mark in this paper. The queried host identifications may thus represent the particular species, or a similar or contiguous species, but this is considered preferable to no indication of a probable host.

Glycaspis specimens in museums and other relevant institutions in each State were examined.

Preparing Specimens

All specimens collected were held in 90% alcohol until required for processing. Only occasional very slight damage occurs to specimens stored in this manner, and the procedure involves much less time, effort and care than mounting specimens on pins or cardboard points. Dried specimens are readily damaged, are rarely complete for examination, and extra time and care must be given when processing such specimens. Specimens stored in alcohol, rather than dried specimens, thus provide much more satisfactory material, the only possible disadvantage being the loss of green coloration which appears to be of little consequence in the taxonomy of species in this group.

The following procedures and formulae were adopted for the preparation of slide material:- Specimens were boiled in 90% alcohol in 2" x ½" tubes, in a water bath, for about 10 minutes (dried specimens 15-20 mins.); the alcohol was then decanted and 10% potassium hydroxide added to the specimens which were again boiled, for 5 mins. (dried specimens 10-15 mins.); specimens were washed in 95% alcohol which was then decanted; clearing fluid was added to specimens and heated gently for 10-15 mins. Specimens were then ready for mounting on slides, and provided that the clearing fluid did not crystallise, could be retained in it indefinitely.

Clearing fluid formula:- Equal parts by weight of crystalline phenol and chloral hydrate melted together at a low temperature, and made isotonic or slightly hypertonic to mountant, by the addition of glucose syrup. Mounting fluid:- Gum arabic 12 gm., chloral hydrate 20 gm., glacial acetic acid 5 ml., 50% w/w glucose syrup, distilled water.

Describing Species

Most of the descriptions are based on specimens preserved in 90% alcohol, and all specimens listed were collected by the writer unless otherwise stated.

A large number of male specimens of each species for examining on slides is desirable, so that the stability of morphological characters for a species may be assessed, but large numbers were not always available.

The provision of accurate drawings of the male claspers and aedeagus, together with a definite host correlation, and perhaps an indication of general coloration, is at present considered to be the most satisfactory basis for the separation of species in the genus. By providing drawings at a consistent magnification and with a constant size reduction in their reproduction, together with measurements of aedeagi, and the study of the male genitalia and claspers, considerable accuracy in the determination of species is possible. All drawings of the claspers and aedeagus were prepared at the same magnification as those for previous papers, and were made with the aid of an ocular graticule, and faint blue-ruled ¼" squared statistic paper.

The use of written keys is considered by the writer to be redundant for *Glycaspis* spp. Although it has been considered advisable to record the general coloration of species described in this paper, the unreliability of colour as a means of identification of most species is emphasised. Because of this factor, more than one species may be included in some of the tubed material, and the coloration of some holotypes was not recorded prior to placing them on slides.

The illustrations used in previous papers by the writer have been reproduced in this Revision, to provide the sequence of known species.

Because of the limited knowledge available concerning each species described, and the small number of specimens of most species collected, it has been considered advisable, in the interests of future workers on this Australian group, to restrict dispersal of type-material collected by the writer. Unless otherwise stated, all specimens have been lodged with the Australian National Insect Collection, C.S.I.R.O., Canberra, Australian Capital Territory.

Institutions from which specimens have been received, or in which specimens have been lodged, are referred to by the following prefix letters:-

AM	Australian Museum, Sydney.
BM	British Museum (Natural History), London.
BP	Bernice P. Bishop Museum, Honolulu, Hawaii.
CS	Australian National Insect Collection, C.S.I.R.O., Canberra.
FC	Forestry Commission of New South Wales, Sydney.
NA	N S.W. Department of Agriculture, Sydney.
OM	Osaka Museum of Natural History, Osaka, Japan.
QF	Queensland Forests Department, Brisbane.
QP	Queensland Department of Primary Industries, Brisbane.
QU	University of Queensland, Brisbane.
SI	Waite Agric. Research Institute, Adelaide, South Australia.
SM	South Australian Museum, Adelaide.
TA	Tasmanian Department of Agriculture, Hobart.
UM	United States National Museum, Washington.
VM	National Museum of Victoria, Melbourne.
WA	Western Australian Department of Agriculture, Perth.

Taxonomic Concepts

Discussing the present status of various taxonomic concepts, Johnson (1968) considers that phylogeny is held to be the nearest approach to a firm basis of reference in nature for biological classification, and the necessity for compromise and continual synthesis is stressed. The desirability of such an approach became obvious during this study, and the genus is interpreted on that basis.

Taxonomically, species are arranged according to:- (a) Lerp shape when known; (b) Length and shape of vein Cu_1 of the hindwing of the adults; (c) Morphology of the male aedeagi and claspers; (d) Host associations.

Biological investigations and intensive observations on *Glycaspis* spp. are important, and are most necessary for some groups in *Glycaspis*, but the time available for this study allowed only limited investigations of these aspects.

The type-localities of all previously described *Glycaspis* spp. were sampled and collections made from all hosts considered as likely to be those of the described species, on the evidence given in the papers published by the various authors.

The present interpretation of the phylogeny of the genus *Eucalyptus* as presented by Blakely (1955) has been of limited value as a basis for correlation of the phylogeny of *Glycaspis* spp., and his sequence has not been followed. Information concerning the phylogeny and host associations of *Glycaspis* spp. may be of some value in a reappraisal of the genus *Eucalyptus,* and is presented in the accompanying paper in which the results gained from this project are discussed.

The advisability, or otherwise, of placing such a large number of species within the one psyllid genus, has been considered.

The genus *Eucalyptus* is a relatively homogeneous botanical group of some 400-500 spp. of small and large trees and shrub-like mallees. On present knowledge concerning their taxonomy and phylogeny, it would seem inappropriate to consider placing any group of these species in a separate genus. Present knowledge concerning species in the genus *Glycaspis* has shown a relatively close host association with a discrete eucalypt species or group of species, and when these associations are considered, objections to such a large number of species being referred to the genus *Glycaspis* appear to be obviated. Species in the most recent subgenus *Boreioglycaspis* are associated with *Melaleuca* and *Tristania* spp., but their morphology suggests a close phylogenetic link with the other two subgenera.

To erect separate genera for those species at present contained in the three *Glycaspis* subgenera, would appear to the writer to disrupt unnecessarily the sequence of their phylogeny within the genus as previously interpreted (Moore 1961, 1964b), so that the concept of the genus as a composite group containing species in three subgenera is retained.

TAXONOMY

A Correction

The type-species *Glycaspis flavilabris* (Froggatt) was designated by Taylor, 1960. The subgenus *Alloglycaspis* was later erected by the writer (Moore 1961), and *G. flavilabris* became the type-species of the subgenus *Glycaspis* under the rules of the International Code of Zoological Nomenclature.

Previously, on an initial examination of the single female specimen of *G. flavilabris,* attached by gum to a card, it was noted that the stem of M+Cu in the venation of the forewing was much shorter than that on specimens then placed in the subgenus *Alloglycaspis,* so that other species with the short M+Cu stem consequently were assigned to *Glycaspis* (*Glycaspis*) by the writer (Moore 1961, pp. 128-9, 132-148). This interpretation has since proved to be erroneous, for present knowledge concerning the genus now indicates that the length of the M+Cu stem of the forewing, although relatively stable within each subgenus, exhibits some variation.

Only a single specimen of *G. flavilabris,* in the C.S.I.R.O. collection at Canberra, was known to the writer in 1961 and it was considered inadvisable, at that time, to process and place it on a slide for examination, as no constant morphological characters of female specimens had been determined whereby species could be separated. The importance of the vein Cu_1 of the hindwing was not fully understood, and the host association of this species was not known. Because the specimen was unique, and glued to a card, and so that possible damage to the specimen might be avoided, vein Cu_1 of the hindwing was not examined. However, this vein, and the host plant species which has since been determined as *E. goniocalyx* (= *E. elaeophora*), certainly refer *G. flavilabris* to *Glycaspis* (*Alloglycaspis*) of Moore 1961. The subgenus *Alloglycaspis* thus becomes a junior synonym of the subgenus *Glycaspis.*

The short M+Cu stem is apparently characteristic only of *G. flavilabris* within the revised subgenus *Glycaspis,* with that of *G. minuscula* intermediate to *G. flavilabris* and *G. eucalypti.* All other species at present known to have the stem of M+Cu short, are referable to the new subgenus erected in this paper.

Those species previously referred to the subgenus *Alloglycaspis* (Moore 1961, 1964, 1964a) must now be regarded as constituting the subgenus *Glycaspis* (*Glycaspis*) with *G. flavilabris* (*non G. baileyi* Moore 1961) as the type-species, and those species (except *G. flavilabris*) previously assigned to the old subgenus *Glycaspis* (*Glycaspis*) (see Moore 1961, 1961a) now constitute a new subgenus.

All further references to species and subgenera in this paper are used according to this corrected interpretation *sensu stricto.*

The corrected interpretation of the presumed evolution of species in *Glycaspis* is represented by the following sequence of subgenera, progressing from the most primitive group to the more recent:-

Subgen. nov. ———— *Glycaspis* ———— *Boreioglycaspis.*

The Genus *Glycaspis*

Glycaspis Taylor 1960, pp. 384-385, Pl. 1, figs. 2 & 3.

Spondyliaspis sensu Schwarz (non Signoret, 1879): Schwarz 1898, Proc. Ent. Soc. Washington, *4*:68-69.

Spondyliaspis sensu Schwarz: Froggatt 1900, Proc. Linn. Soc. N.S.W., *25*(2): 288-289.

Spondyliaspis sensu Schwarz: Tuthill & Taylor 1955, Aust. J. Zool. *3*(2): 230-231.

Type-species: *Glycaspis flavilabris* (Froggatt)
Type Locality: Rylstone, New South Wales.

Taylor defined the principal characters of the genus on knowledge concerning the species at that time. Additional information is now available, and the principal characters are re-defined as:-

Genal processes from about two-thirds as long as, to much longer than, the vertex; processes porrect to vertical.

Antennae longer than width of head.

Forewing long; acutely angulate to rounded, apically; pterostigma present; Rs long, almost parallel with costa and terminating near or at apex of wing; stem of M+Cu short or long.

Metatibia shorter than, or equal in length to, femur; enlarged distally and bearing a variable number of dark spines apically.

Proximal segment of metatarsus pad-like, swollen, bearing a strong ventral distal claw.

As suggested by Heslop-Harrison (1949), classification of any particular psyllid group presents inherent difficulties, and the genus *Glycaspis* appears to be no exception.

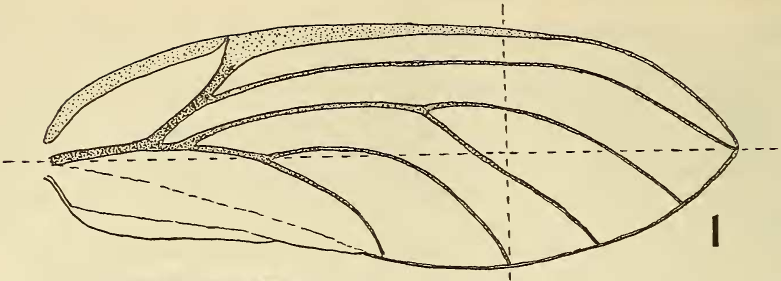
The three subgenera fall within loosely defined limits, and some characters whereby they may be separated, are presented. Single characters are dealt with serially, for ease of reference.

Characters by which the three subgenera may be separated

1. *Proximal angle of cell M of forewing*:
   Commencing well before the projected termination of Cu_1 from posterior border of forewing (Text-fig. 1) .... Subgen. nov.
   Commencing near or at the projected termination of Cu_1 from posterior border of forewing (Text-fig. 3) .... *Glycaspis*
   Commencing distal to the projected termination of Cu_1 from posterior border of forewing (Text. fig. 7) .... *Boreioglycaspis*
2. *Cubital cell of forewing*:
   Large, long, with Cu_1 strongly curved towards its base (Text-fig. 1) .... Subgen. nov.
   Intermediate in size, with basal half of Cu_1 more or less parallel with M (Text-fig. 3) .... *Glycaspis*
   Small (Text-fig. 7) .... *Boreioglycaspis*
3. *Stem of M+Cu of forewing*:
   Short (Text-fig. 1) (except *G. flavilabris*) .... Subgen. nov.
   Short or long; that of *G. flavilabris* short, and that of *G. minuscula* intermediate to it and *G. eucalypti* (Text-fig. 3) .... *Glycaspis*
   Long (Text-fig. 7) .... *Boreioglycaspis*
4. *Forewing apically*:
   Subacute (Text-fig. 1) .... Subgen. nov.
   More or less rounded (except *flavilabris*) (Text-fig. 3) .... *Glycaspis*
   Acute (except *penangensis* & *forcipata*) (Text-fig. 7) .... *Boreioglycaspis*
5. *Claspers*:
   With or without dark pegs and/or strong basal spine (Text-figs. 9 to 44) .... Subgen. nov.
   Without dark pegs or basal spine (Text-figs. 45 to 123) .... *Glycaspis*
   With dark pegs but without basal spine (Text-figs. 124 to 131) .... *Boreioglycaspis*
6. *Distal segment of male proctiger*:
   Much shorter than proximal segment (see Moore 1964b, Text-fig. 12) .... Subgen. nov. & *Glycaspis*
   About equal to proximal segment (see Moore 1964b, Text-figs. 13 & 14) .... *Boreioglycaspis*
7. *Aedeagus*:
   Single-jointed (Text-figs. 9 to 123) .... Subgen. nov. & *Glycaspis*
   Two-jointed (Text-figs. 124 to 131) .... *Boreioglycaspis*
8. *Origin of veins M & R of hindwings*:
   Well separated (Text-figs. 2 & 4 to 6) .... Subgen. nov. & *Glycaspis*
   Close together (Text-fig. 8) .... *Boreioglycaspis*

Characters under 1. and 2. are definitive for each subgenus, while those under 3. indicate a phylogenetic link between the new subgenus and *Glycaspis*.

Figures 1-8. Wings of *Glycaspis* spp. representative of the three subgenera.
(Figs. 1 and 2) *Glycaspis* (*Synglycaspis*)
(Figs. 3 to 6) *Glycaspis* (*Glycaspis*)
(Figs. 7 and 8) *Glycaspis* (*Boreioglycaspis*)



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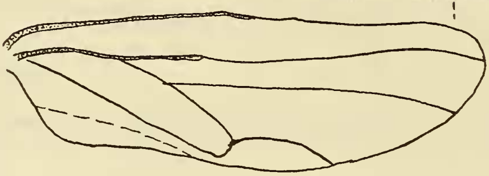

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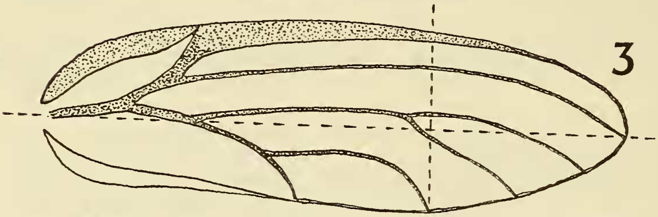

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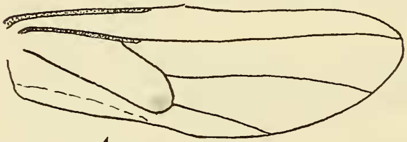

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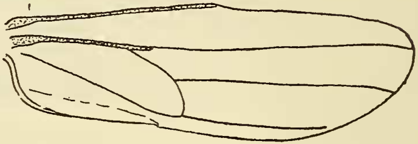

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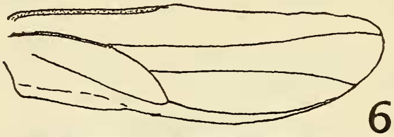

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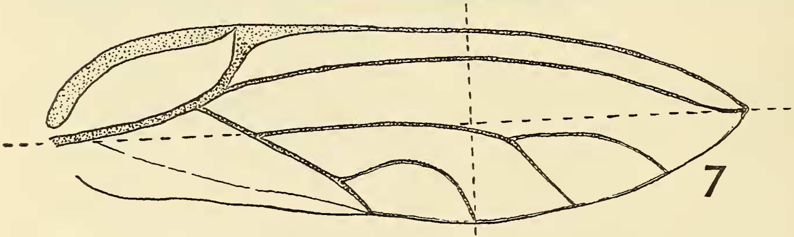

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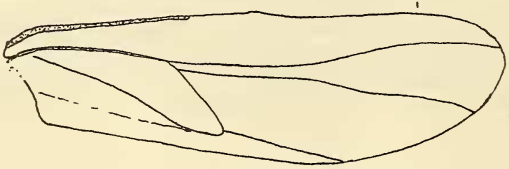

8

(For explanation of figures, see page 253)

Subgenus *Synglycaspis*, nov.

(Gr. *syn-* = together)

Glycaspis (*Glycaspis*): Moore 1961, pp. 128-148, Text-figs. 5 to 23, Pl. vi, figs. 1 to 4.

Type Species: *Glycaspis* (*Synglycaspis*) *longaeva*, sp. nov. (here designated).

Type Locality: Queen's Domain, Hobart, Tasmania.

Gall Formers

All species are very similar in coloration, usually being pale yellow to orange, with or without some dark markings, sometimes with green suffusion in living or dried specimens. Any deviation from this general coloration pattern is recorded under the relevant species.

Present taxonomic arrangement of the 15 gall-forming species studied, is based on the sequential reduction in size of the large internal basal spine on the male claspers. These spines are absent from the claspers of four species in which they are apparently replaced by a dense series of strong pegs or setae (Text-figs. 20 to 23).

Glycaspis (*Synglycaspis*) *brunosa*, sp. nov.

(*L. brunus* = brown; *-osus* = full of, prone to)

General Colour: Orange brown to dark brown; female wings suffused deep yellow.

Claspers & Aedeagus: As in Text-fig. 9.

Length of Aedeagus: (3 specimens) 0.293mm. to 0.315mm.

Host Plant: *Eucalyptus coccifera* Hook. f. (Mt. Wellington peppermint).

Type Locality: Mt. Wellington (near summit), Tasmania.

Types: Holotype male on slide labelled "Mt. Wellington, Tas., 3500'-4000', 21 xii 1966, *E. coccifera*". Paratypes (slides): 2 ♂s with same label data except date which is "14 xii 1966". (in alcohol): 1♂ 6♀s "Mt. Wellington, Tas., 14 xii 1966, *E. coccifera*"; 2♀s with same label data except date which is "21 xii 1966"; 1♀ "Cradle Mtn., Tas., 4500', 1 i 1967, *E. coccifera*". (dried specimens): 2♀s ,'Mt. Wellington, Tas., 2 xi 1959, K. L. Taylor, *E. coccifera*".

Glycaspis (*Synglycaspis*) *obvelata*, sp. nov.

(*L. obvelatus* = hidden, covered)

Claspers & Aedeagus: As in Text-fig. 10.

Length of Aedeagus: (1 specimen) 0.320mm.

Host Plant: *E. ?sieberi* L. Johnson (mountain ash).

Type Locality: 22 mi. north of Bicheno, Tasmania.

Type: Holotype male on slide labelled "22 mi. N. Bicheno. Tas. (1500'), 28 xii 1966, *E. ?sieberi*".

Other Specimens Examined: (Slides): 1♂ Mt. Macedon, Vic., 25 x 1963, A.N.", to VM. 3♂s "French's Forest, N.S.W., 11 vii 1951, K. L. Taylor, *Eucalyptus* sp.: 1♂ "Warrandyte, Vic., 25 vii 1928, G. F. Hill, emgd. 31 vii 1928."

Glycaspis (*Synglycaspis*) *occulta*, sp. nov.

(*L. occultus* = hidden)

Claspers & Aedeagus: As in Text-fig. 11.

Length of Aedeagus: (1 specimen) 0.302 mm.

Host Plant: *Eucalyptus ? simmondsi* Maiden (Simmond's peppermint).

Type Locality: Inglis River, Tasmania.

Type: Holotype male on slide labelled "Inglis Riv., Tas., 4 xii 1966, *E. ?simmondsii*".

Other Specimens Examined: (slide) 1♂ "Black Mtn. A.C.T. 5 xii 1956, K. L. Taylor, *E. macrorhyncha*".

Glycaspis (*Synglycaspis*) *perthecata*, comb. nov.

Glycaspis (*Glycaspis*) *perthecata* Moore 1961, p. 138, Text-fig. 13.

Claspers & Aedeagus: As in Text-fig. 12.

Length of Aedeagus: (1 specimen) 0.311 mm.

Host Plant: *E. haemastoma* Sm. (scribbly gum).
Type Locality: Ourimbah State Forest, N.S.W.
Type: Holotype in AM.

Glycaspis (*Synglycaspis*) *longaeva*, sp. nov.
(*L. longaevus* = of great age, ancient)

General Colour: Deep yellow to orange; wings suffused yellow.
Claspers & Aedeagus: As in Text-fig. 13.
Length of Aedeagus: (3 specimens) 0.279 mm. to 0.290 mm.
Host Plant: *E. linearis* Dehn. (white peppermint).
Type Locality: Queen's Domain, Hobart, Tasmania.
Types: Holotype male on slide labelled "Domain, Hobart, Tas., 17 xii 1966, *E. linearis*". Paratypes (slides): 2♂s with same label data. (in alcohol): 30♂s, 37♀s with same label data.
Other Specimens Examined: (dried) 2♀s "Domain, Hobart, Tas., 31 x 1959, K. L. Taylor, *E. linearis*."
Notes: The narrow leaves of the host plant are distinctively bent upwards from near the centre of their length where the gall is usually formed.

Glycaspis (*Synglycaspis*) *cellula*, sp. nov.
(*L. cellula* = a small cell or chamber)

Claspers & Aedeagus: As in Text-fig. 14.
Length of Aedeagus: (1 specimen) 0.290 mm.
Host Plant: *E. ? amygdalina* Labill. (black peppermint).
Type Locality: 5 mi. NW. of St. Helen's, Tasmania.
Type: Holotype male on slide labelled "5 mi. NW. St. Helen's, Tas., 29 xii 1966, reared from *E. ? amygdalina*, emgd. 1 i 1967."
Other Specimens Examined: (in alcohol) 1♀ "1 mi. W. Kimberley, Tas., 31 xii 1966, *E. ? amygdalina*."

Glycaspis (*Synglycaspis*) *cyta**, comb. nov.
Glycaspis (*Glycaspis*) *cytos* Moore 1961, pp. 135-136, Text-fig. 10.

Claspers & Aedeagus: As in Text-fig. 15.
Length of Aedeagus: (1 specimen) 0.403 mm.
Host Plant: *E. pilularis* Sm. (blackbutt).
Type Locality: Kincumber, N.S.W.
Types: Holotype, paratypes, in AM.

Glycaspis (*Synglycaspis*) *inclusa*, comb. nov.
Glycaspis (*Glycaspis*) *inclusa* Moore 1961, p. 135, Text-fig. 9.

Claspers & Aedeagus: As in Text-fig. 16.
Length of Aedeagus: (3 specimens) 0.309 mm. to 0.313 mm.
Host Plants: *E. umbra* R. T. Bak. (bastard mahogany); *? E. macrorhyncha* F. Muell. (red stringybark).
Type Locality: Mangrove Mtn., N.S.W.
Types: Holotype, paratype in AM.
Other Specimens Examined: (Slides) 1♂ "Black Mtn. ACT., 5 xii 1956, K. L. Taylor, *E. macrorhyncha*"; 1♂ "Clyde Mtn. N.S.W., 2400', 17 x 1960, I. F. B. Common & M. S. Upton; (Dried) 1♀ "Black Mtn., ACT., 5 xii 1956, K. L. Taylor, *E. macrorhyncha*"

Glycaspis (*Synglycaspis*) *encystis*, comb. nov.
Glycaspis (*Glycaspis*) *encystis* Moore 1961, p. 136, Text-fig. 11.

Claspers & Aedeagus: As in Text-fig. 17.
Length of Aedeagus: (3 specimens) 0.295 mm. to 0.320 mm.
Host Plant: *E. agglomerata* Maiden (blue-leaved stringybark).
Type Locality: Ourimbah State Forest, N.S.W.
Types: Holotype & paratypes in AM.
Other Specimens Examined: (Slide) 1♂ "Warrandyte, Vic., 25 vii 1928, G. F. Hill, Emgd. 31 vii 1928".

Glycaspis (*Synglycaspis*) *amplificata*, comb. nov.
Glycaspis (*Glycaspis*) *amplificata* Moore 1961, p. 135, Text-fig. 8.

Claspers & Aedeagus: As in Text-fig. 18.

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* The Greek word *kytos* is latinised and rendered in the feminine gender, to agree with *Glycaspis* which is of feminine gender.

Length of Aedeagus: (1 specimen) 0.274 mm.
Host Plant: *E. acmenioides* Schau. (white mahogany).
Type Locality: Ourimbah State Forest, N.S.W.
Type: Holotype in AM.

Glycaspis (*Synglycaspis*) *cyrtoma*, comb. nov.

Glycaspis (*Glycaspis*) *cyrtoma* Moore 1961, p. 136, Text-fig. 12.

Claspers & Aedeagus: As in Text-fig. 19.
Length of Aedeagus: (1 specimen) 0.315 mm.
Host Plant: *E. piperita* Sm. (Sydney peppermint).
Type Locality: Olney East State Forest, N.S.W.
Type: Holotype in AM.

Glycaspis (*Synglycaspis*) *belua*, sp. nov.

(*L. belua* = a monster)

Claspers & Aedeagus: As in Text-fig. 20.
Length of Aedeagus: (4 specimens) 0.323 mm. to 0.389 mm.
Host Plant: *E. niphophila* Maiden & Blakely (snow gum).
Type Locality: Mt. Gingera, Australian Capital Territory.
Types: Holotype male on slide labelled "Mt. Gingera, A.C.T., 20 ii 1953, K. L. Taylor, *E. niphophila*". Paratypes: (slides) 3 ♂s with same label data. (dried) 7 ♂s 7 ♀s with same label data.
Notes: This is the largest species of *Glycaspis* known. It is grouped with the following 3 spp. which do not bear a large basal spine on the male claspers.

Glycaspis (*Synglycaspis*) *commoni*, sp. nov.

(Named for Dr. I. F. B. Common, of the C.S.I.R.O., Canberra. who collected a large number of specimens of this genus).

Claspers & Aedeagus: As in Text-fig. 21.
Length of Aedeagus: (1 specimen) 0.243 mm.
Host Plant: Unknown.
Type Locality: Mt. Buangor, 13 mi. N.E. Beaufort, Victoria.
Type: Holotype male on slide labelled "Mt. Buangor, 1400', 13 mi. N.E. Beaufort, Vic., 14 ii 1956, I. F. B. Common".
Other Specimens Examined: (dried) 1 ♀ with same label data.

Glycaspis (*Synglycaspis*) *munita*, sp. nov.

(*L. munitus* = protected; referring to the nymph within the gall).

General Colour: Orange; numerous dark marks; wings of females yellow.
Claspers & Aedeagus: As in Text-fig. 22.
Length of Aedeagus: (2 specimens) 0.248 mm. and 0.270 mm.
Host Plant: *E. simmondsii*.
Type Locality: 22 mi. E. Queenstown, Tasmania.
Types: Holotype male on slide labelled "22 mi. E. Queenstown, Tas., 9 xii 1966, *E. simmondsii*". Paratypes: (slides) 1 ♂ with same label data. (in alcohol) 2 ♀s with same label data.

Glycaspis (*Synglycaspis*) *immaceria*, sp. nov.

(*L. im* = in; *maceria* = an enclosure, wall)

Claspers & Aedeagus: As in Text-fig. 23.
Length of Aedeagus: (1 specimen) 0.281 mm.
Host Plant: *E. rossii* R. T. Bak. & H. G. Smith (white gum).
Type Locality: Black Mountain, Australian Capital Territory.
Types: Holotype male on slide labelled "Black Mtn., A.C.T., 17 i 1967, *E. rossii*". Paratype (in alcohol): 1 ♀ with same label data.

Flat Lerp-formers

Two structural types of flat lerps are now known—(a) those of fine texture constructed in more or less the same plane as the leaf surface, with the nymphs forming pits in the leaf surface, in which they feed; (b) those of granular texture and slightly raised as a dome above the leaf surface, and with little or no pitting of the leaf.

From an examination of a large number of specimens constructing flat lerps, extensively collected from many areas during this project, and from numerous host species of the renantherous *Eucalyptus* spp., characters of the adults do not appear to be sufficiently well defined to erect more than two new species, so that all recently collected material other than that from *E. rodwayi* (= Tasmanian *E. aggregata*), is included in a single new species. Because of present uncertainty with the morphological separation and recognition of species in this group, it is considered advisable to allow the previously described species to stand, until further essential intensive biological studies are made to resolve this uncertainty.

The species on *E. rodwayi* is being described as new, because of the distinctive lerp shape. Including the 2 species described here, there are now 5 spp. known which construct flat lerps.

Glycaspis (*Synglycaspis*) *planitecta*, sp. nov.

(*L. planus* = flat; *tectum* = a roof)

General Colour: Pale yellow to orange; with or without variable dark markings.

Claspers & Aedeagus: As in Text-fig. 24.

Length of Aedeagus: (34 specimens) 0.196 mm to 0.265 mm.

Host Plants: *E. obliqua* L'Herit. (messmate); *E. baxteri* (Benth.) Maiden & Blakely (Baxter's stringybark); *E. caliginosa* Blakely & McKie (broad-leaved stringybark); *E. oblonga* DC. (common sandstone stringybark); *E. ?macrorhyncha; E. diversifolia* Bonpl. (soap mallee); *E. simmondsii; E. robertsonii* Blakely. (Robertson's peppermint); *E. ?amygdalina; E. coccifera; E. stellulata* Sieb. ex DC. (black sally); *E. rossii; E. pauciflora* Sieb. ex Spreng. (cabbage gum); *E. niphophila; E. dives* Schau. (broad-leaved peppermint).

Type Locality: Mt. Lofty (near summit), South Australia.

Types: Holotype male on slide labelled "Mt. Lofty, S.A., 8 xi 1966, *E. obliqua*".

Paratypes: (slides) 1♂ with same label data as the holotype; 1♂ "23 mi. S. Keith, S.A., 15 xi 1966, *E. obliqua* with affin. *E. baxteri*"; 3♂s "22 mi. S. Keith, S.A., 15 xi 1966, *E. diversifolia*"; 3♂s "Olinda Ck., Vic., 27 xi 1966, *E. obliqua*"; 3♂s "2 mi. E. Foster, Vic., 5 i 1967, *E. ?obliqua;* 1♂ "25 mi. E. Port Campbell, Vic., 21 xi 1966, *E. ?obliqua*"; 1♂ "2 mi. N. Cranbourne, Vic., 4 i 1967, *E. ?robertsonii*"; 1♂ "7 mi. NE. Loch, Vic., 4 i 1967, *E. robertsonii*"; 1♂ "22 mi. N. Bicheno, Tas., 28 xii 1966, *E. ?obliqua*"; 1♂ "Mt. Wellington, Tas., 21 xii 1966, *E. coccifera*"; 1♂ "1 mi. E. Ferntree (Hobart) Tas., 14 xii 1966, *E. amygdalina*"; 1♂ "9 mi. N. Triabunna, Tas., 27 xii 1966, *E. ?amygdalina*"; 2♂s "22 mi. E. Queenstown. Tas., 9 xii 1966, *E. simmondsii*"; 1♂ "Inglis Riv., Tas., 4 xii 1966, *E. amygdalina - E. simmondsii* cline"; 1♂ "Lake St. Clair, Tas., 10 xii 1966, *E. ?simmondsii*"; 2♂s "20 mi. N. Berridale, N.S.W., 10 i 1967, *E. ?pauciflora*"; 2♂s "5 mi. N. Adaminaby, N.S.W., 10 i 1967, *E. stellulata*"; 1♂ "Scammel's Spur, N.S.W., 9 i 1967, *E. dives*"; 1♂ "14 mi. S. Kiandra, N.S.W., 11 i 1967, *Euc.* sp."; 1♂ "Mt. York, Blue Mts., N.S.W., 1 ii 1967, *Euc.* sp."; 2♂s "Ben Bullen, N.S.W., 1 ii 1967, *Euc.* sp."; 2♂s "Black Mtn., A.C.T., 17 i 1967, *E. rossii*".

(in alcohol): 5♂s 7♀s, "Mt. Lofty, S.A., 8 xi 1966, *E. obliqua*"; 4♀s "23 mi. S. Keith, S.A., 15 xi 1966, *E. obliqua* affin. *E. baxteri*"; 15♂s 23♀s "22 mi. S. Keith, S.A., 15 xi 1966, *E. diversifolia*"; 1♀ "2 mi. E. Stoke's Bay, Kangaroo Id., S.A., 4 xi 1966, *Euc.* sp."; 1♀ "Kangaroo Id., S.A., 4 xi 1966, *E. ?diversifolia;* 1♂ 2♀s "Olinda Ck., Vic., 27 xi 1966, *E. obliqua*"; 2♀s "25 mi. E. Port Campbell, Vic., 21 xi 1966, *E. ?obliqua*"; 4♂s 10♀s "Foster, Vic., 5 i 1967, *E. ?obliqua*"; 2♀s "22 mi. N. Omeo, Vic., 7 i 1967, *E. pauciflora*"; 20♂s 40♀s "7 mi. NE. Loch, Vic., 4 i 1967, *E. robertsonii*"; 3♀s "2 mi. N. Cranbourne, Vic., 4 i 1967, *E. ?robertsonii*"; 2♀s "1 mi. along Rose's Gap Rd. (Grampians) Vic., 18 xi 1966, *E. baxteri*"; 1♀ "Mt Difficult (Grampians) Vic., 18 xi 1966, *Euc.* sp."; 1♂ 12♀s "22 mi. N. Bicheno, Tas., 28 xii 1966, *E. ?obliqua*"; 1♂ 1♀ "6 mi. S. Buckland, Tas., 27 xii 1966, *E. ?obliqua*"; 8♂s 17♀s "5 mi. S. Cygnet, Tas., 18 xii 1966, *E. ?obliqua*"; 5♀s "22 mi. E. Queenstown, Tas., 9 xii 1966, *E. simmondsii*"; 2♀s "Inglis Riv., Tas., 4 xii 1966, *E. amygdalina - E. simmondsii* cline"; 1♀ "1 mi. W. Kimberley, Tas., 31 xii 1966, *E. ?amygdalina*"; 2♀s "Mt. Wellington, Tas., 21 xii 1966, *E. coccifera*"; 2♀s "Mt. Wellington, Tas., 14 xii 1966, *E. coccifera*"; 1♂ 7♀s "9 mi. N. Triabunna, Tas., 27 xii 1966, *Euc.* sp."; 2♀s "5 mi. NW. St. Helen's, Tas., 29 xii 1966, *Euc.* sp."; 8♀s "11 mi. W. Jindabyne, N.S.W., 10 i 1967, *E. pauciflora*"; 4♀s "4 mi. E. Jindabyne, N.S.W., 10 i 1967, *E. ?pauciflora*"; 1♂ 6♀s "20 mi. N. Berridale, N.S.W., 10 i 1967, *E. ?pauciflora*"; 4♀s "1 mi. W. and 8 mi. E. Thredbo, N.S.W., 9 i 1967, *E. ?pauciflora*"; 1♀ "3 mi. N. Goulburn, N.S.W., 18 i 1967, *E. rossii*"; 3♀s "18 mi. E. Armidale, N.S.W., 9 iv 1966, *E. caliginosa*"; 4♀s "3 mi. S. Kiandra, N.S.W., (4850'), 11 i 1967, *E. niphophila*"; 4♀s "5 mi. N. Adaminaby, N.S.W., 10 i 1967, *E. stellulata*"; 1♀ "14 mi. S. Kiandra, N.S.W, 11 i 1967, *Euc.* sp."; 2♂s 4♀s "Ben Bullen, N.S..W., 1 ii 1967, *Euc.* sp."; 1♀, same locality, "30 viii 1964"; 3♀s "6 mi. S. Rylstone, N.S.W., 1 ii 1967, *E. oblonga*"; 1♂ 1♀ "1 mi. W. Rylstone, N.S.W., 1 ii 1967, *E. ?oblonga*"; 1♂ 5♀s "Black Mtn., A.C.T., 17 i 1967, *E. rossii*"; 1♂ 2♀s "Black Mtn., A.C.T., 17 i 1967, *E. ?macrorhyncha*".

Other Specimens Examined: (Slides): 2♂s 1♀ "Grove, Tas., 4 i 1963, 14 i 1963, 21 i 1963, to TA; Newtown, Tas., 5 ix 1962; ex Moericke Yellow Tray", to TA; 1♂ Arve Riv. Tas., 23 ii 1963, I. F. B. Common & M. S. Upton"; 1♂ "Clyde Mtn., N.S.W., 2400', 17 x 1960, I. F. B. Common & M. S. Upton". (Dried): 2♂s 8♀s "Arve Riv., Tas., 23 ii 1963, I. F. B. Common & M. S. Upton"; 1♂ 1♀ "Arve Riv. Tas., 3 xi 1959, K. L. Taylor, *E. obliqua*".

Notes: Leaves on *E. diversifolia* are severely curled when attacked.

Glycaspis (*Synglycaspis*) *tagmata*, sp. nov.

(Gr. *tagmatos* = a division. Referring to the indication given by this species of a division from other known species constructing flat lerps).

Claspers & Aedeagus: As in Text-fig. 25.

Length of Aedeagus: (3 specimens) 0.200 mm. to 0.209 mm.

Host Plant: *E. rodwayi* R. T. Bak. & H. G. Sm. (= Tasmanian "*E. aggregata*").

Type Locality: Great Lake, Tasmania

Types: Holotype male on slide labelled "Great Lake, Tas., 28 x 1959, D. Martin, *E. rodwayi* (= *aggregata*)". Paratypes: (slides) 2♂s with same label data. (dried) 3♀s with same label data. A series of 9 lerps has also been examined.

Notes: The lerps of this species are of different form and structure from other flat lerps constructed by species reared by the writer (Moore 1961, Pl. vi, figs. 2 & 3). In structure, they are granular and similar to the conical round lerps of this subgenus. In shape they are more or less round with a flattened dome. A slight depression in the leaf surface below the lerp is evident.

Glycaspis (*Synglycaspis*) *nundlensis*, comb. nov.

Glycaspis (*Glycaspis*) *nundlensis* Moore 1961b, pp. 201-202, Text-fig. 1.

Claspers & Aedeagus: As in Text-fig. 26.

Length of Aedeagus: (2 specimens), each 0.214 mm.

Host Plant: *E. radiata subplatyphylla* Blakely & McKie (almond-leaved peppermint)

Type Locality: Nundle State Forest, New South Wales.

Types: Holotype & paratype in AM.

Specimens Examined: 1♂ "Black Mtn., A.C.T., 14 ii 1955, I. F. B. Common. Light trap."

Glycaspis (*Synglycaspis*) *phreata**, comb. nov.

Glycaspis (*Glycaspis*) *phreatos* Moore 1961, p. 138, Text-fig. 14.

Claspers & Aedeagus: As in Text-fig. 27.

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* The Greek word *phreatos* is latinised, and the gender is altered to agree with the generic name.

Length of Aedeagus: (3 specimens) 0.236 mm. to 0.250 mm.
Host Plant: *E. oblonga* DC. (common sandstone stringybark).
Type Locality: Wentworth Falls, N.S.W.
Types: Holotype in AM; paratypes in AM and CS.

Glycaspis (*Synglycaspis*) *planaria*, comb. nov.

Glycaspis (*Glycaspis*) *planaria* Moore 1961, p. 138, Text-fig. 15.

Claspers & Aedeagus: As in Text-fig. 28.
Length of Aedeagus: (1 specimen) 0.245 mm.
Host Plant: *E. piperita.*
Type Locality: Wentworth Falls, N.S.W.
Type: Holotype in AM.

Round Lerp-formers

This group now contains 16 species.

Three divergent sub-groups occur:- (i) one species occurring on *E. coccifera* and one on *E. linearis;* (ii) one species occurring on *E. acmenioides* and one on *E. umbra;* (iii) the remaining 12 spp. in this subgenus.

Glycaspis (*Synglycaspis*) *nigrocincta* (Froggatt), comb. nov.

Spondylaspis nigro-cincta Froggatt 1903, pp. 324-5, Pl. 5, figs. 2 & 6.
Spondyliaspis nigrocincta: Tuthill & Taylor 1955, p. 231.
Glycaspis nigrocincta: Taylor 1960, p. 385.
Glycaspis (*Glycaspis*) *nigro-cincta*: Moore 1961, p. 132.

General Colour: Yellow, extensively marked with black.
Claspers & Aedeagus: As in Text-fig. 29.
Length of Aedeagus: (5 specimens) 0.212 mm. to 0.221 mm.
Host Plants: *E. coccifera; E. delegatensis* R. T. Bak. (gum-top stringybark ash); *E. rodwayi.*
Type Locality: Mt. Wellington (near summit), Tasmania.
Specimens Examined: (slides) 1♂ "Summit of Mt. Wellington, Tas. (Lea)", (from card with 3♀s); to TA; 1♂ "Mt. Wellington, Tas., 3500'-4000', 21 xii 1966, *E. coccifera*"; 1♀ "Summit of Mt. Wellington, Tas. (Lea) 12/02, Type, 20 iii 1902, W.W.F."; 2♂s "Guildford Junction, Tas., 7 xii 1966, *E. rodwayi*"; 2♂s "24 mi. N. Tullah, Tas., 7 xii 1966, *E. delegatensis*". (in alcohol): 1♂ 3♀s Mt. Wellington, Tas., 3500'-4000', 21 xii 1966, *E. coccifera*"; 1♀ with same label data, but date "14 xii 1966"; 1♂ 6♀s "24 mi. N. Tullah, Tas., 7 xii 1966, *E. delegatensis*"; 1♀ "6 mi. S.E. Tarraleah, Tas., 11 xii 1966, *E. delegatensis*". (dried specimens): 3♀s on one card labelled "Summit of Mt. Wellington, Tas., (Lea)", to TA.; 1♀ "Cradle Mtn., Tas., Carter & Lea", to SM; 1♀ "on *Eucalyptus coccifera*".
Notes: At the conclusion of Froggatt's original description of this species, he gives the data:- "Hab.- Mt. Wellington, Hobart, Tasmania (on *Eucalyptus coccifera;* A. M. Lea; two specimens ♂)".

Specimens loaned from the Tasmanian Department of Agriculture collection included 1♂ 3♀s all mounted on a single card, with label data "Summit of Mt. Wellington, Tas., (Lea)". A single ♀ whole mount on a slide, loaned from the National Insect Collection, Canberra, A.C.T., bears label data "Summit of Mt. Wellington, Tas. (Lea)". Both of these labels are machine printed. On the label of the single ♀ specimen is the date "12/02" handwritten in ink, and the slide also bears a second label with the data "Type 20 3.1902. W.W.F.", also handwritten in ink. This second label bears 3 pinholes, indicating that it may have been transferred from other specimens.

From the relevant data given in Froggatt's paper and quoted above, it is considered that none of these specimens was before Froggatt when he described the species, so that they cannot be treated as syntypes.

The two male specimens referred to by Froggatt appear to be lost or destroyed, and the abovementioned specimens are being treated as *G. nigrocincta,* without designating a Neotype or Lectotype.

The only male specimen mentioned above, from the card also bearing 3 female specimens, has been placed on a slide as a whole mount. An additional male specimen collected by the writer from *E. coccifera* near the summit of Mt. Wellington, Tasmania, was also placed on a slide, and the morphology of the claspers and aedeagus of each specimen was found to correspond. These two male specimens are considered to be the material most suitable for the future recognition of the species *G. nigrocincta.*

During December, 1966, two other species forming galls and flat lerps respectively, were collected from *E. coccifera* near the summit of Mt. Wellington, where Lea apparently obtained his specimens. On comparison with the specimens collected by Lea, and with Froggatt's description of *G. nigrocincta,* it is clear that neither of these two species are *G. nigrocincta.*

All of the material mentioned under "Specimens Examined" is considered to be *G. nigrocincta.*

Glycaspis (*Synglycaspis*) *temenicola,* sp. nov.

(Gr. *temenos* = a piece of land marked off for common uses; *L. -icola* = an inhabitant. Referring to the type locality).

General Colour: Cream to pale yellow, with dark marks.
Claspers & Aedeagus: As in Text-fig. 30.
Length of Aedeagus: (8 specimens) 0.209 mm. to 0.234 mm.
Host Plants: *E. linearis; E. simmondsii; E. ?pauciflora.*
Type Locality: Queen's Domain, Hobart, Tasmania.
Types: Holotype male on slide labelled "Domain, Hobart, Tas., 17 xii 1966, *E. linearis*"; Paratypes: (slides) 2♂s with same label data; 3♂s "Point Lookout (E. of Armidale), N.S.W., 9 iv 1966, *E. ?pauciflora*"; 2♂s "22 mi. E. Queenstown, Tas., 9 xii 1966, *E. simmondsii*"; 1♂ "Domain, Hobart, Tas., 31 x 1959, K. L. Taylor, *E. linearis*". (in alcohol): *ca.* 150♂s 150♀s with same label data as the holotype; 15♂s 29♀s "Pt. Lookout, N.S.W., 9 iv 1966, *E. ?pauciflora*"; 4♂s 4♀s "22 mi. E. Queenstown, Tas., 9 xii 1966, *E. simmondsii*"; 1♀ "Guildford Junction, Tas., 7 xii 1966, *Euc.* sp.".
Notes: Adults may be distinguished from those of *G. nigrocincta* by their paler coloration and smaller size;; the spine on the claspers is nearer the base than that of *nigrocincta,* is different in shape, and bears fewer setae.

Glycaspis (*Synglycaspis*) *dreptodria,* sp. nov.

(Gr. *dreptos* = gathered; *drios* = a thicket)

Claspers & Aedeagus: As in Text-fig. 31.
Length of Aedeagus: (9 specimens) 0.281 mm. to 0.295 mm.
Host Plants: *E. simmondsii; E. pauciflora; E. ?radiata; E. ?stellulata; E. ?amygdalina; E. niphophila.*
Type Locality: 42 mi. E. Queenstown, Tasmania.
Types: Holotype male on slide labelled "42 mi. E. Queenstown, Tas., 9 xii 1966, *E. simmondsii*". Paratypes: (slides) 1♂ with same label data as holotype; 3♂s "Hanging Rock S.F., N.S.W., 4100', 6 iii 1961, K. L. Taylor, *E. pauciflora*"; 4♂s "Lee's Spring, A.C.T., 4000', 27 iii 1951, I. F. B. Common, *E. niphophila*". (in alcohol) 3♀s with same label data as the holotype. (dried) 3♂s 12♀s "Hanging Rock S.F., N.S.W., 4100', 6 iii 1961, K. L. Taylor, *E. pauciflora*".
Other Specimens Examined: (slides) 5♂s "5 mi. N. Adaminaby, N.S.W., 10 i 1967, *E. stellulata*"; 1♂ "5 mi. NW. St. Helens, Tas., 29 xii 1966, *E. ?amygdalina*"; 2♂s "2 mi. NE. Woodside, Vic., 5 i 1967, *E. radiata*"; 1♂ "Arve Riv., Tas., 23 ii 1963, I. F. B. Common & M. S. Upton"; 1♂ "Point Lookout, Armidale, N.S.W., 9 iv 1966, *E. ?pauciflora.* (in alcohol) 12♂s 11♀s "5 mi. N. Adaminaby, N.S.W., 10 i 1967, *E. stellulata*"; 6♀s "5 mi. N. St. Helens, Tas., 29 xii 1966, *E. ?amygdalina*"; 1♂ 9♀s "2 mi. NE. Woodside, Vic., 5 i 1967, *E. radiata*"; 3♀s "9 mi. N. Triabunna, Tas., 27 xii 1966, *E. ?amygdalina*"; 1♀ "22 mi. E. Queenstown, Tas., 9 xii 1966, *E. simmondsii*";

1♀ "35 mi. W. Scottsdale, Tas., 29 xii 1966, *Euc.* sp."; 1♀ "5 mi. E. Smithton, Tas., 6 xii 1966, *E. amygdalina - E. simmondsii* cline". (dried) 2♀s "Lee's Spring, A.C.T., 4000', 27 iii 1951, I. F. B. Common, *E. niphophila*".

Glycaspis (*Synglycaspis*) *particeps*, sp. nov.

(L. *particeps* = a sharer. Referring to the occurrence of this species with another *Glycaspis* sp. on the same host).

Claspers & Aedeagus: As in Text-fig. 32.

Length of Aedeagus: (5 specimens) 0.236 mm. to 0.265 mm.

Host Plants: *E. baxteri; ?E oblonga; ?E. caliginosa; E. macrorhyncha; E. obliqua.*

Type Locality: 23 mi. S. Keith, South Australia.

Types: Holotype male on slide labelled "23 mi. S. Keith, S.A., 15 xi 1966, *E. obliqua*". Paratypes (slides) 2♂s "Keith, S.A., 18 vii 1963, T. C. R. White, eggs hatched 20 vii, adults emgd. 7, 10, 12 viii '63, Rearing Nos. 70, 80, 90, *E. baxteri*"; 2♂s "Wirrega, (nr. Brecon) S.A., 23 iv 1969, T. C. R. White, *E. baxteri,* reared in lab., emgd. 18-20 v 1969". (in alcohol) 2♀s with same label data as the holotype; 2♂s 3♀s "2 mi. E. Foster, Vic., 5 i 1967, *E.? obliqua*"; 1♂ "5 mi. S. Cygnet, Tas., 18 xii 1966, *E. ?obliqua*"; 2♂s 4♀s "Wirrega, (nr. Brecon) S.A., 23 iv 1969, T. C. R. White, *E. baxteri,* reared in lab., emgd. 18-20 v 1969"; 2♀s, nymph, "Keith, S.A., 18 vii 1963, T. C. R. White, eggs hatched 20 vii 1963, adults emgd. 7, 10, 12 viii 1963, Rearing Nos. 70, 80, 90, *E. baxteri*"; 1♀ "8 mi. W. Peterborough, Vic., 20 xi 1966, *E. obliqua*".

Other Specimens Examined: (slides) 2♂s "6 mi. S. Rylstone, N.S.W., 1 ii 1967, *E. oblonga*"; 1♂ "1 mi. W. Rylstone, N.S.W., 1 ii 1967, *E. ?oblonga*"; 5♂s "18 mi. E. Armidale, N.S.W., 9 iv 1966, *E. caliginosa*"; 1♂ "Stirling W., S.A., 8 x 1963, J. Bevan, *E. obliqua*", to SI; 1♂ "13 mi. E. Geehi, N.S.W., 9 i 1967, *E. ?robertsonii*"; 1♂ "7 mi. NE. Loch, Vic., 4 i 1967, *E. robertsonii*"; 1♂ "Emerald, (?Vic.) 16 v 1907"; 2♂s "Black Mtn., A.C.T., 17 i 1967, *E. ?macrorhyncha*". (in alcohol) 3♂s 9♀s "6 mi. S. Rylstone, N.S.W., 1 ii 1967, *E. oblonga*"; 7♂s 2♀s "18 mi. E. Armidale, N.S.W., 9 iv 1966, *E. caliginosa*". (dried) 1♀ "Emerald, (?Vic.) 16 v 1907"; 3♀s "Stirling W., S.A., 8 x 1963, J. Bevan, *E. obliqua*", to SI.

Glycaspis (*Synglycaspis*) *icterica*, sp. nov.

(Gr. *ikterikos* = yellowish)

General Colour: Yellow, sometimes with dark marks.

Claspers & Aedeagus: As in Text-fig. 33.

Length of Aedeagus: (3 specimens) 0.234 mm. to 0.243 mm.

Host Plants: *E. marginata* Donn. ex Sm. (jarrah); *?E jacksonii* Maiden (red tingle tingle).

Type Locality: 3.6 mi. N. Tuart Hill, Perth, Western Australia.

Types: Holotype male on slide labelled "3.6 mi. N. Tuart Hill, Perth, W.A., 1 ix 1966, *E. marginata*". Paratypes: (slides) 2♂s with same label data. (in alcohol) 9♂s 6♀s with same label data; 11♂s 1♀ "4.5 mi. N. Tuart Hill (Yanchep Rd.), Perth, W.A., 15 ix 1966, *E. marginata*"; 6♂s 3♀s "4 mi. N. Scarborough Beach, Perth, W.A., 14 ix 1966, *E. marginata*"; 1♂ 1♀ "25 mi. SE. Nannup, W.A., 19 ix 1966, *E. marginata*"; 1♀ "17 mi. NW. Deep Riv., W.A., 20 ix 1966, *?E. jacksonii*".

Other Specimens Examined: (dried), 1♀ "Nedlands, W.A., 5 iv 1960, M. M. H. Wallace, Light trap"; 1♀ "15 mi. NW. Walpole, W.A., 15 xi 1958, I. F. B. Common".

Notes: The species occurring on *E. marginata* is the only species in which the median pegs on the male claspers are not dark. It apparently evolved in isolation in Western Australia, and it is presumed that the pale median pegs are an evolutionary result of this long isolation.

Glycaspis (*Synglycaspis*) *hirsuta* (Froggatt), comb. nov.

Spondylaspis hirsutus Froggatt 1903, pp. 323-4, Pl. 4, Fig. 6, Pl. 5, figs. 4, 5.

Spondyliaspis hirsutus: Tuthill & Taylor 1955, p. 231.
Glycaspis hirsuta: Taylor 1960, p. 385.
Glycaspis (*Glycaspis*) *hirsuta*: Moore 1961, p. 132.

Claspers & Aedeagus: As in Text-fig. 34.

Host Plants: ?*E. pilularis* Sm. (blackbutt); ?*E. robusta* Sm. (swamp mahogany); ?*E. cypellocarpa* L. Johnson (spotted mountain gum).

Type Locality: Thirroul, N.S.W.

Type: Holotype ♀ (dried specimen) labelled "Hairy Shell Lerp, Thirrol, N.S.W., 18 vi 1901, W.W.F. Type W.W.F. 1901, *Glycaspis* (*Synglycaspis*) *hirsuta* (Froggatt) Holotype".

Other Specimens Examined: (slides) 2♂s "1 mi. S. Thirroul, N.S.W., 20 i 1967, *E. pilularis*"; 4♂s "Jigamy Ck., Eden, N.S.W., 3 x 1962, K. G. Campbell, *E. ?goniocalyx*" (probably *cypellocarpa*); 1♂ "Sugar lerp, Thirroul, N.S.W., W.W.F.". (in alcohol) 1♂ 1♀ "1 mi. S. Thirroul, N.S.W., 20 i 1967, *E. pilularis*"; 3♂s 10♀s "Jigamy Ck., Eden, N.S.W., 3 x 1962, K. G. Campbell, *E. cypellocarpa*". (Dried) 1♂ 1♀ "Sugar lerp, Thirroul, N.S.W., W.W.F.".

Notes: Lerps round. In his original description, Froggatt does not state the sex of the specimen on which he based his description of *G. hirsuta.* The only available syntype from Thirroul (a female specimen) appears to be the specimen on which he based his description, and as it also bears the label "Type", it is here interpreted as being the holotype. His description of the lerp, and his fig. 5, Pl. 5, are based on specimens of 2 lerps labelled with the same data as the holotype, but as previously mentioned (Moore 1961, p. 132), these lerps obviously were not constructed by any species of the genus *Glycaspis.* Froggatt has labelled these lerps "Hairy shell lerp". His figs. 4 & 5, Pl. 5, are captioned *"Spondyliaspis nigro-cincta"*, but on examination of the adult ♀ labelled "Type", and the two lerps, there is no doubt that the caption should read *"S. hirsutus"*.

During 20 January, 1967, the type locality was visited by the writer. *Glycaspis* specimens were collected approximately 1 mi. S. of the township of Thirroul, in an area where it was considered that there may have grown previously, specimens of *E. robusta* (the eucalypt species from the leaves of which Froggatt recorded that he collected the species *G. hirsuta*). No locality could be found in the vicinity of Thirroul where *E. robusta* at present occurs. The species *E. pilularis* occurred there, and *E. robusta* sometimes occurs in association with this species.

In that area on the above date, 3♂s and 1♀ constructing round lerps were collected from *E. pilularis,* and these specimens appear to be conspecific with *G. hirsuta.* Superficially, the foliage of the *E. pilularis* trees, and particularly of the regeneration on the area, appeared very similar to that of *E. robusta,* as leaves were much broader than those usually found on the former species. This foliage was quite atypical, and it is considered that Froggatt may have mistaken *E. pilularis* for *E. robusta.*

Glycaspis (*Synglycaspis*) *fuliginis,* sp. nov.

(L. *fuliginis* = soot, black paint)

General Colour: Numerous dark marks.

Claspers & Aedeagus: As in Text-fig. 35.

Length of Aedeagus: (3 specimens) 0.216 mm. to 0.225 mm.

Host Plants: *E. globoidea* Blakely (round fruited stringybark); *E. andreana* Naudin (kayer-ro, or river peppermint).

Type Locality: 5 mi. W. Lakes Entrance, Victoria.

Types: Holotype male on slide labelled "5 mi. W. Lakes Entrance, Vic., 6 i 1967, *E. globoidea*". Paratypes: (slides) 2♂s with same label data. (in alcohol) 1♂ 7♀s with same label data.

Other Specimens Examined: (slides) 4♂s "Greig's Flat, Eden, N.S.W., 19 xi 1965, *E. andreana*"; 4♂s "12.5 mi. N. Bega, N.S.W., 30 x 1962, K. G. Campbell, *E. andreana*" (in alcohol) 11♂s 32♀s "Greig's Flat, N.S.W., 19 xi 1965, *E. andreana*"; 4♂s 5♀s "12.5 mi. N. Bega, N.S.W., 30 x 1962, K. G. Campbell, *E. andreana*".

Glycaspis (*Synglycaspis*) *seriata*, comb. nov.

Glycaspis (*Glycaspis*) *seriata* Moore 1961, pp. 141-2, Text-fig. 18.

Claspers & Aedeagus: As in Text-fig. 36.
Length of Aedeagus: (19 specimens) 0.216 mm. to 0.250 mm.
Host Plant: *E. pilularis*.
Type Locality: Ourimbah State Forest, N.S.W.
Types: Holotype in AM, Paratypes in AM, BM, CS.

Glycaspis (*Synglycaspis*) *conserta*, comb. nov.

Glycaspis (*Glycaspis*) *conserta* Moore 1961, pp. 143-5. Text-fig. 20.

Claspers & Aedeagus: As in Text-fig. 37.
Length of Aedeagus: (12 specimens) 0.267 mm. to 0.284 mm.
Host Plant: *E. sieberi*.
Type Locality: Somersby, N.S.W.
Types: Holotype in AM; paratypes in AM, BM, CS and FC.
Specimens Examined: (slides) 2♂s "Launceston, Tas., Littler, Bred", to BM; 3♂s "Launceston, Tas., Littler, Bred"; 2♂s "Sydney, N.S.W., 4 xii 1921, W. W. Froggatt, Sugar lerp, *E. sieberi*. (dried) 3♂s, 1 nymph, "Sydney, N.S.W., 4 xii 1921, W. W. Froggatt, Sugar lerp, *E. sieberi*"; 2♂s 5♀s "Sydney, N.S.W., 4 xii 1921, W. W. Froggatt, Sugar lerp, *E. sieberi*", to NA.

Glycaspis (*Synglycaspis*) *salebrosa*, comb. nov.

Glycaspis (*Glycaspis*) *salebrosa* Moore 1961, pp. 145-6, Text-fig. 22.

Claspers & Aedeagus: As in Text-fig. 38.
Length of Aedeagus: (23 specimens) 0.250 mm. to 0.270 mm.
Host Plants: *E. piperita*; *E. andrewsii* Maiden (New England blackbutt).
Type Locality: Somersby, N.S.W.
Types: Holotype & paratypes in AM, paratypes in BM, CS and FC.

Glycaspis (*Synglycaspis*) *cyanoreia**, comb. nov.

Glycaspis (*Glycaspis*) *cyanoreios* Moore 1961, p. 145, Text-fig. 21.

Claspers & Aedeagus: As in Text-fig. 39.
Length of Aedeagus: (4 specimens) 0.245 mm. to 0.252 mm.
Host Plant: *E. stricta* Sieb. ex Spreng. (Blue Mountain mallee).
Type Locality: Wentworth Falls, N.S.W.
Types: Holotype in AM, paratypes in AM, BM, CS.

Glycaspis (*Synglycaspis*) *conflecta*, comb. nov.

Glycaspis (*Glycaspis*) *conflecta* Moore 1961, pp. 142-3, Text-fig. 19.

Claspers & Aedeagus: As in Text-fig. 40.
Length of Aedeagus: (12 specimens) 0.239 mm. to 0.263 mm.
Host Plants: *E. eugenioides* Sieb. ex Spreng. (small-leaved stringybark); *E. ?oblonga* DC.; *E. ?agglomerata*; *E. ?rossii*, *E. ?macrorhyncha*.
Type Locality: Kurrajong, New South Wales.
Specimens Examined: (slides) 3♂s "4 mi. S. Broke, N.S.W., 25 iv 1967, *E. eugenioides*"; 1♂ "3 mi. N. Goulburn, N.S.W., 18 i 1967, *E. ?rossii*"; 1♂ "Mittagong, N.S.W., 1905, Koebele"; 1♂ "Black Mtn., A.C.T., 10 iii 1955, I. F. B. Common, light trap"; 3♂s "Nelson Bay, N.S.W., 12 xi 1960, I. F. B. Common & M. S. Upton"; 1♂ "3 mi. W. Rylstone, N.S.W., 6 iv 1966, *E. rossii*"; 2♂s "Pearson's lookout, Ben Bullen, N.S.W., 1 ii 1967, *Euc.* sp."; 2♂s "Goodna, Qld., 8 ix 1966, R. A. Yule", to QF; 2♂s "Black Mtn., A.C.T., 17 i 1967, *E. ?macrorhyncha*"; 2♂s "1 mi. W. Rylstone, N.S.W., 7 iv 1966, *E. macrorhyncha*"; 3♂s "3 mi. E. Appin, N.S.W., 20 i 1967,

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* The Greek name is latinised, and the gender is altered to agree with the generic name.

E. agglomerata, adults emgd. 21 i 1967"; 2♂s "1 mi. W. Rylstone, N.S.W., 1 ii 1967, *E. ?oblonga*"; 1♂ "26 mi. S. Tumut, N.S.W., 11 i 1967, adult emgd. 17 i 1967, *E. macrorhyncha*"; 3♂s "3 mi. N. Booral, N.S.W., ii 1955, P. B. Carne, on twigs *Euc.* sp."; 5♂s Toowoomba, Qld., xi 1950, A.M., *Eucalyptus*", to BM; 1♂ "Toowoomba, Qld., 30 xi 1950, J. Letchford", to QU.; 1♂ "Eltham, Vic., Pres. 12 v 1925, G. F. Hill", to VM. (in alcohol) 5♀s "4 mi. S. Broke, N.S.W., 25 iv 1967, *E. eugenioides*"; 1♀ "Rylstone, N.S.W., 30 viii 1964, *E. ?macrorhyncha*"; 1♂ 4♀s "1 mi. W. Rylstone, N.S.W., 7 iv 1966, *E. macrorhyncha*"; 1♂ 4♀s "1 mi. W. Rylstone, N.S.W., 1 ii 1967, *Euc.* sp."; 1♂ 8♀s "Black Mtn., A.C.T., 17 i 1967, *E. ?macrorhyncha*"; 7♂s 4♀s "3 mi. E. Appin, N.S.W., 20 i 1967, *E. agglomerata*, adult emgd. 21 i 67"; 2♂s 2♀s "3 mi. E. Appin, N.S.W., 20 i 1967, *E. agglomerata*"; 1♀ "26 mi. S. Tumut, N.S.W., 11 i 1967, adult emgd. 17 i 1967, *E. macrorhyncha*". (dried) 3♀s "Goodna, Qld., 8 ix 1966, R. A. Yule"; 1♀ with same label data but date "1 viii 1967"; 6♀s "3 mi. N. Booral, N.S.W., ii 1955, P. B. Carne, on twigs *Euc.* sp."; 2♀s "Nelson Bay, N.S.W., 12 xi 1960, I. F. B. Common & M. S. Upton"; 1♀ "Eltham, Vic., Pres. 12 v 1925, G. F. Hill", to VM; 4♀s "Toowoomba, Qld., 30 xi 1950, J. Letchford", to QU; 4♂s 1♀ "Toowoomba, Qld., xi 1950, A.M., ex Eucalypt" to BM.

Glycaspis (*Synglycaspis*) *aggregata*, comb. nov.

Glycaspis (*Glycaspis*) *aggregata* Moore 1961, pp. 146-8, Text-fig. 23.

Claspers & Aedeagus: As in Text-fig. 41.
Length of Aedeagus: (12 specimens) 0.252 mm. to 0.270 mm.
Host Plants: *E. haemastoma*; *E. rossii.*
Type Locality: Somersby, N.S.W.
Types: Holotype in AM; paratypes in AM, BM, CS and FC.
Specimens Examined: (slides) 2♂s "Hornsby, N.S.W., 5 i 1899, W.W.F., Lerp"; 1♂ "Black Mtn., A.C.T., 17 i 1967, *E. rossii*". (dried) 1♀ "Lerp psylla, Hornsby, N.S.W., 5 i 1899, W.W.F.".

Glycaspis (*Synglycaspis*) *endasa*, sp. nov.

(Gr. *en* = in; *dasos* = a thicket or forest)

Claspers & Aedeagus: As in Text-fig. 42.
Length of Aedeagus: (3 specimens) 0.169 mm. to 0.182 mm.
Host Plant: *E. robertsonii* Blakely (Robertson's peppermint).
Type Locality: Towamba, N.S.W. (South Coast).
Types: Holotype male on slide labelled "Towamba, N.S.W., 20 xi 1965, *E. robertsonii*". Paratypes: (slides) 2♂s with same label data. (in alcohol) 12♀s with same label data.

Glycaspis (*Synglycaspis*) *mactans*, comb. nov.

Glycaspis (*Glycaspis*) *mactans* Moore 1961, p. 139, Text-fig. 16.

Claspers & Aedeagus: As in Text-fig. 43.
Length of Aedeagus: (31 specimens) 0.173 mm. to 0.212 mm.
Host Plants: *E. acmenioides* Schau. (white mahogany); *E. umbra* R. T. Bak. (bastard mahogany).
Type Locality: Lisarow, N.S.W.
Types: Holotype in AM. Paratypes in AM, BM, CS, FC.
Other Specimens Examined: (slides) 2♂s "12 mi. W. Gympie, Qld., 20 iv 1966, *E. acmenioides*"; 2♂s "12 mi. E. Mareeba, Qld., 17 v 1966, *E. acmenioides*"; 2♂s "5 mi. SW. Mt. Garnet, Qld., 21 v 1966, *E. acmenioides*"; 1♂ "Ourimbah S.F., N.S.W., 14 xii 1956, K. L. Taylor, *E. acmenioides*". (in alcohol) 6♂s 7♀s "12 mi. W. Gympie, Qld., 20 iv 1966, *E. acmenioides*"; 2♂s 5♀s 1 nymph "Mt. Archer (1400') (Rockhampton) Qld., 28 v 1966, *E. acmenioides*"; 8♂s 10♀s "12 mi. E. Mareeba, Qld., 17 v 1966, *E. acmenioides*"; 1♂ 1♀ "5 mi. SW. Mt. Garnet, Qld., 20 v 1966, at light (Tilley lamp)"; 4♂s 13♀s 26 mi. E. Mt. Garnet, Qld., 20 v 1966, *E. acmenioides*"; 8♂s 6♀s

"5 mi. SW. Mt. Garnet, Qld., 21 v 1966, E. *acmenioides;* 1♂ "Mt. Coot-tha, Brisbane, Qld., 17 iv 1966, *Euc.* sp.". (Dried) 5♀s "Alderly, Qld., 30 viii 1941, 9263", to QP.; 4♂s "Ourimbah S.F., N.S.W., 14 xii 1956, K. L. Taylor, *E. acmenioides*".

Notes: Although the aedeagi of the Queensland specimens are longer than those from N.S.W., and the yellow coloration more intense with an absence of dark markings, there appears to be no doubt that all specimens are referable to this species. The known distribution of this species is from the Hawkesbury River in N.S.W. to near Cairns in Qld.

Glycaspis (*Synglycaspis*) *orientalis*, comb. nov.

Glycaspis (*Glycaspis*) *orientalis* Moore 1961, pp. 139-141, Text-fig. 17.

Claspers & Aedeagus: As in Text-fig. 44.
Length of Aedeagus: (7 specimens) 0.225 mm. to 0.230 mm.
Host Plant: *E. umbra.*
Type Locality: Somersby, N.S.W.
Types: Holotype in AM, Paratypes in AM, BM, CS, FC.
Specimens Examined: (dried) 1♀ "Ourimbah S.F., N.S.W., 14 xii 1956, K. L. Taylor, *E. acmenioides*".

Fig. 9. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *brunosa*, sp. nov.

Fig. 10. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *obvelata*, sp. nov.

Fig. 11. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *occulta*, sp. nov.

Fig. 12. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *perthecata*, comb. nov.

Fig. 13. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *longaeva*, sp. nov.

Fig. 14. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *cellula*, sp. nov.

Fig. 15. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *cyta*, comb. nov.

Fig. 16. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *inclusa*, comb. nov.

Fig. 17. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *encystis*, comb. nov.

Fig. 18. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *amplificata*, comb. nov.

Fig. 19. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *cyrtoma*, comb. nov.

Fig. 20. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *belua*, sp. nov.

Fig. 21. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *commoni*, sp. nov.

Fig. 22. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *munita*, sp. nov.

Fig. 23. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *immaceria*, sp. nov.

Fig. 24. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *planitecta*, sp. nov.

Fig. 25. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *tagmata*, sp. nov.

Fig. 26. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *nundlensis*, comb. nov.

Fig. 27. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *phreata*, comb. nov.

Fig. 28. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *planaria*, comb. nov.

Fig. 29. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *nigrocincta*, comb. nov.

Fig. 30. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *temenicola*, sp. nov.

Fig. 31. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *dreptodria*, sp. nov.

Fig. 32. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *particeps*, sp. nov.

Fig. 33. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *icterica*, sp. nov.

Fig. 34. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *hirsuta*, comb. nov.

Fig. 35. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *fuliginis*, sp. nov.

Fig. 36. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *seriata*, comb. nov.

Fig. 37. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *conserta*, comb. nov.

Fig. 38. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *salebrosa*, comb. nov.

Fig. 39. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *cyanoreia*, comb. nov.

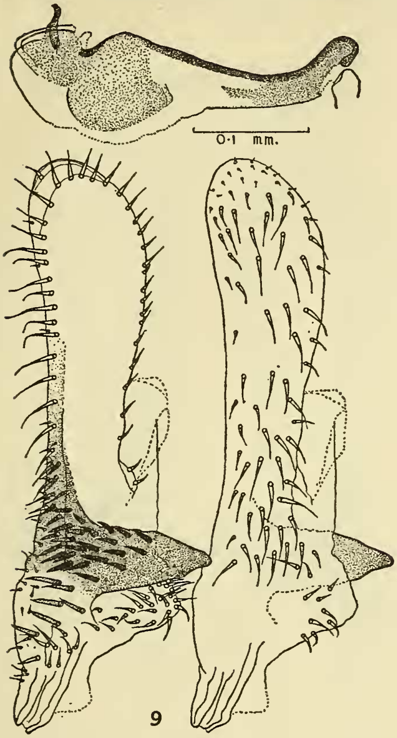
Fig. 40. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *conflecta*, comb. nov.

Fig. 41. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *aggregata*, comb. nov.

Fig. 42. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *endasa*, sp. nov.

Fig. 43. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *mactans*, comb. nov.

Fig. 44. Claspers & aedeagus of *Glycaspis* (*Synglycaspis*) *orientalis*, comb. nov.



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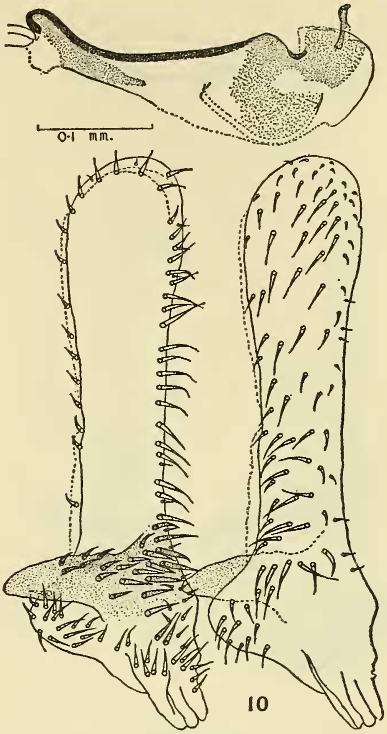

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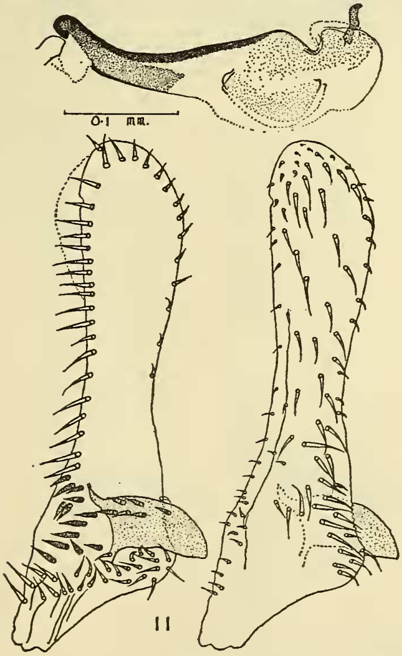

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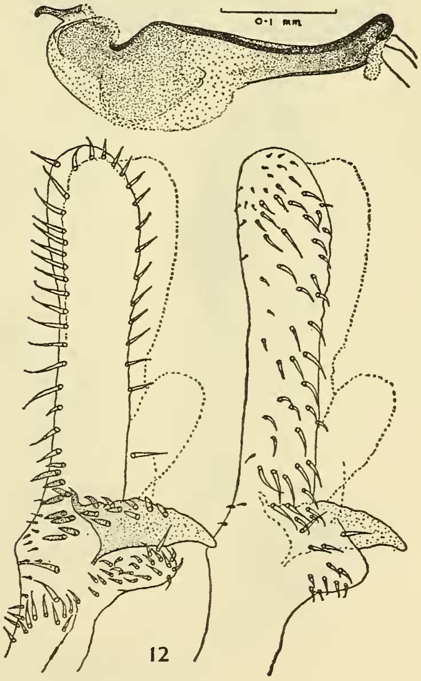

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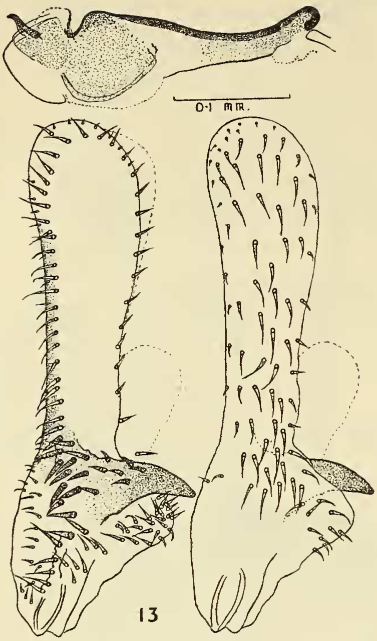

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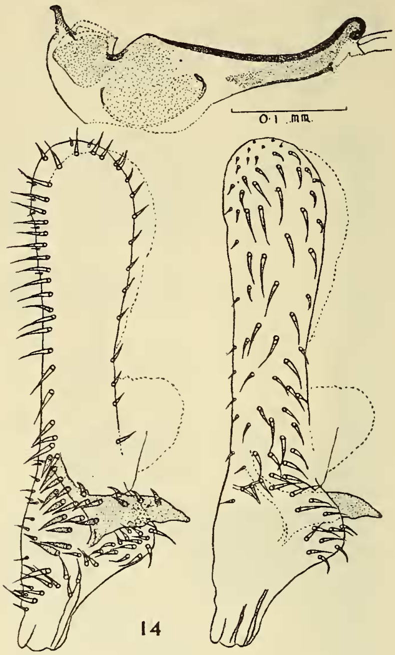

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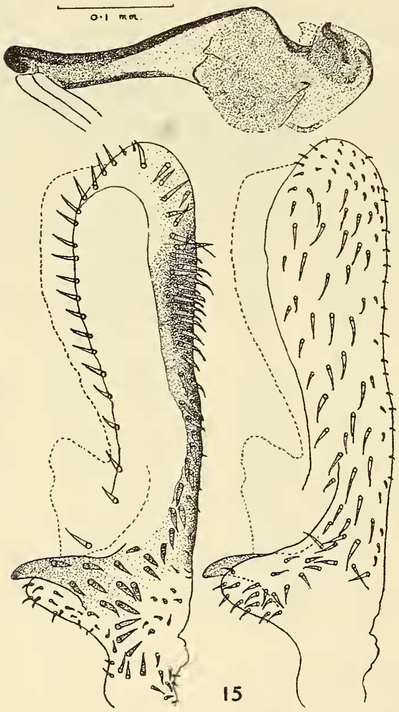

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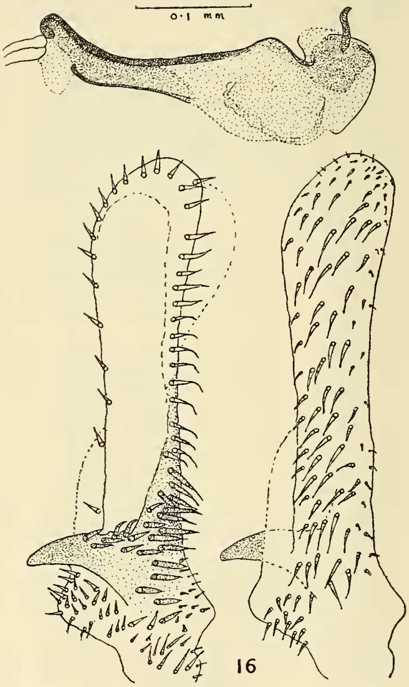

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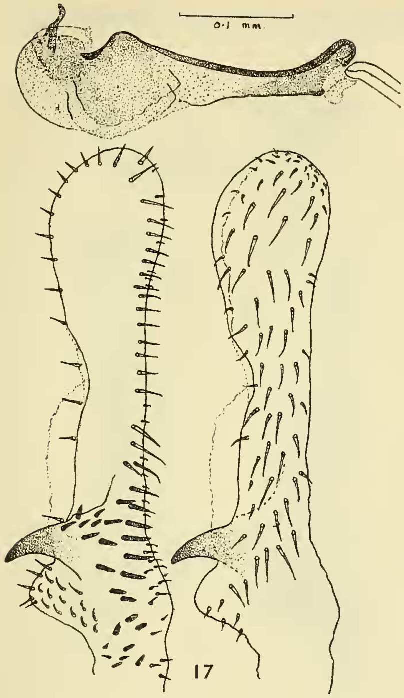

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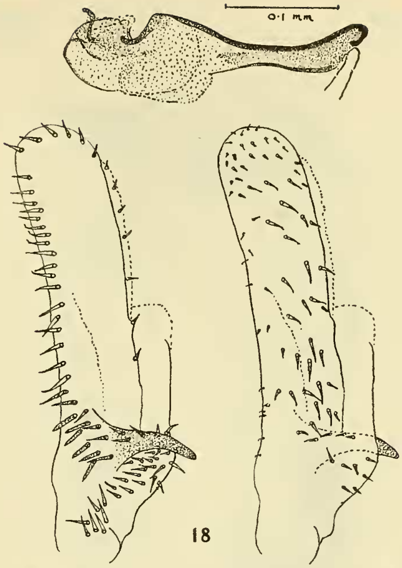

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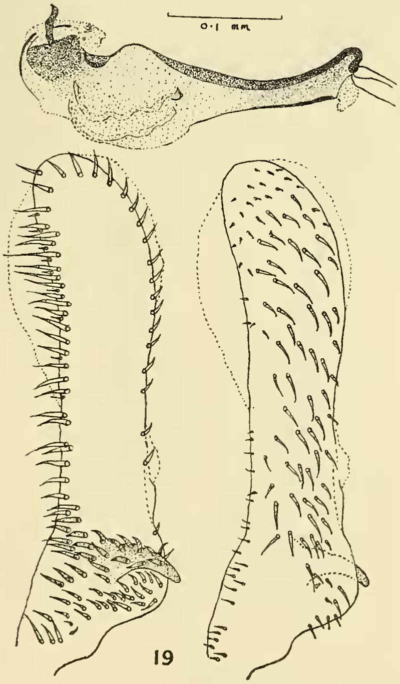

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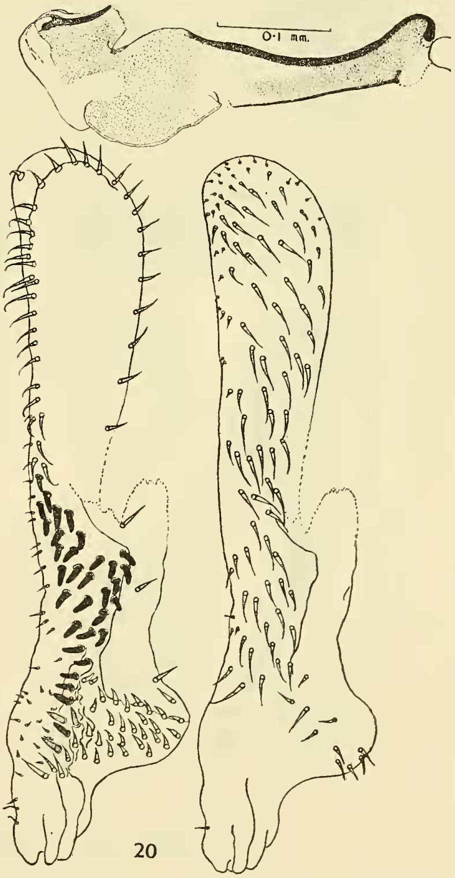

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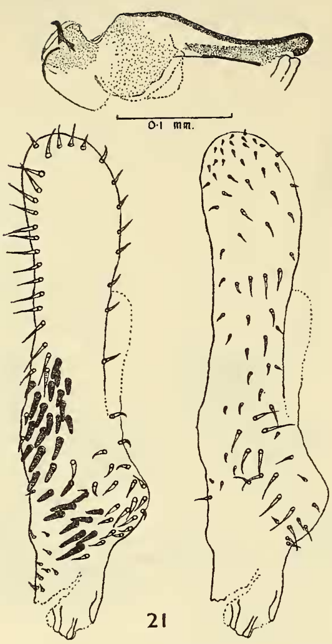

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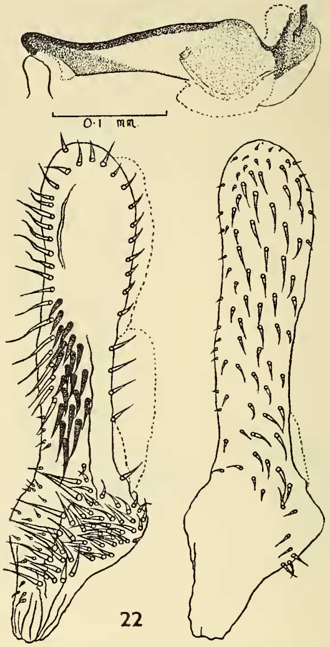

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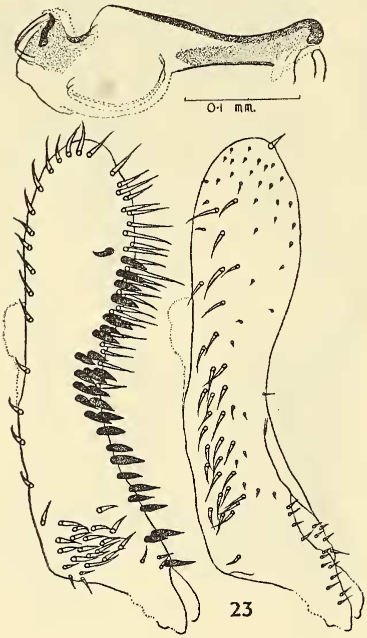

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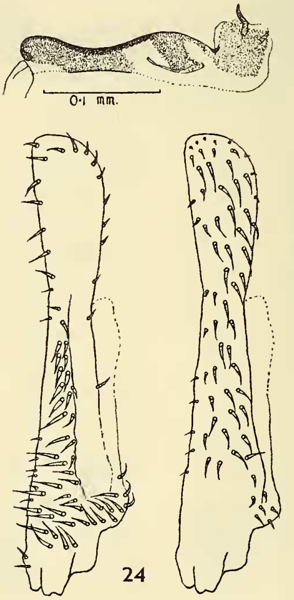

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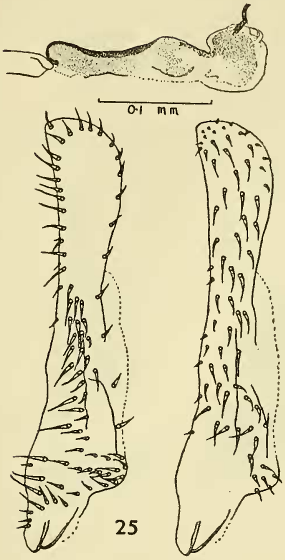

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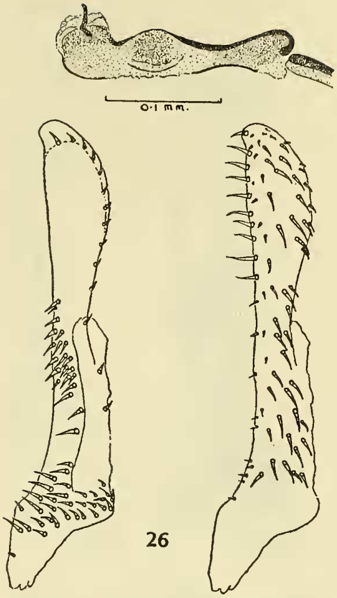

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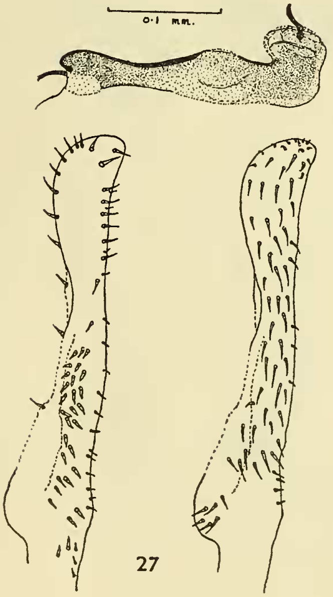

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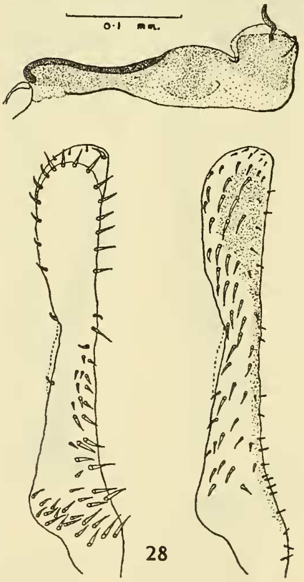

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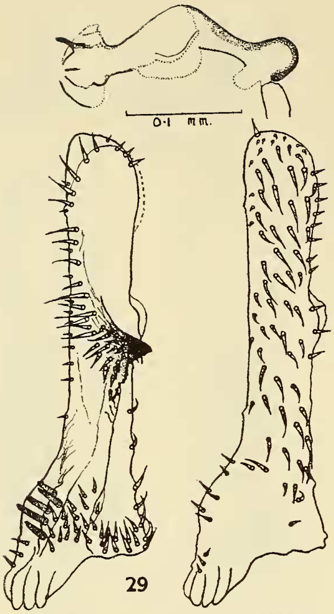

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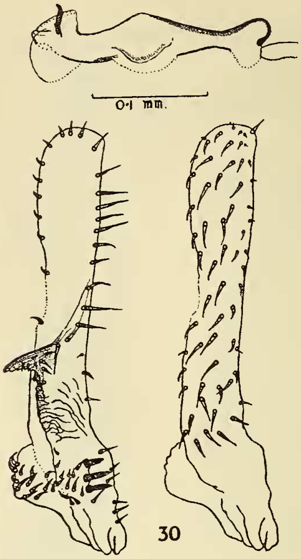

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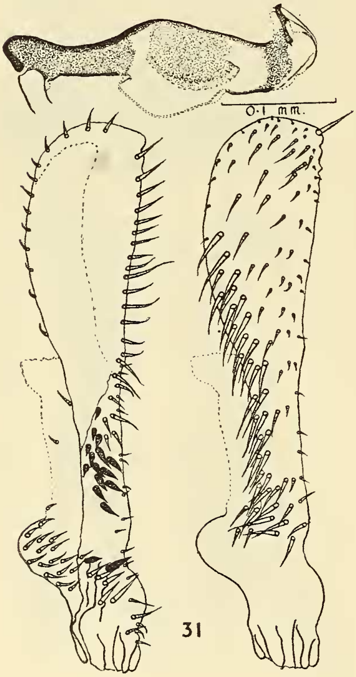

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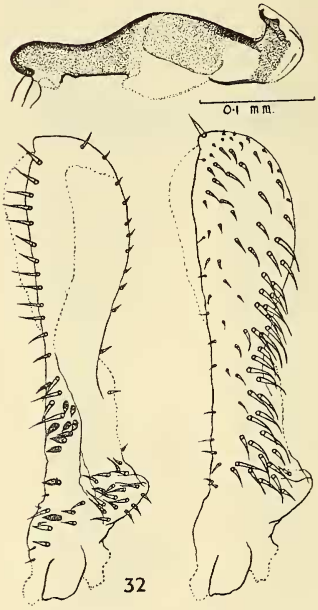

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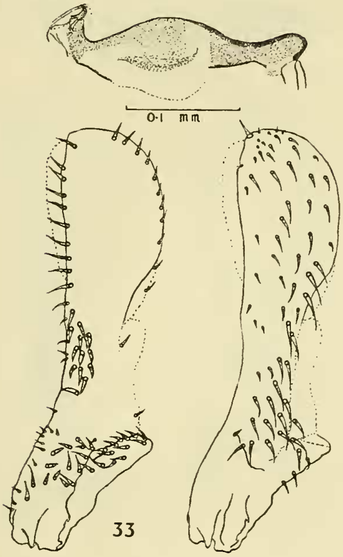

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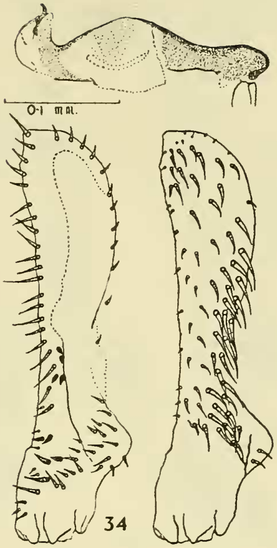

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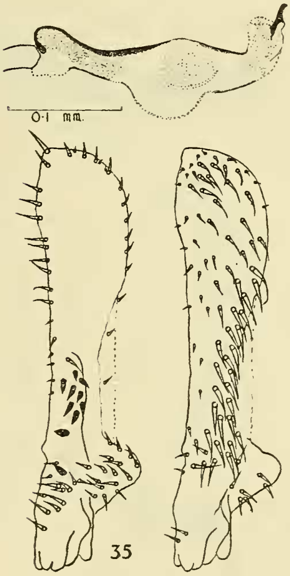

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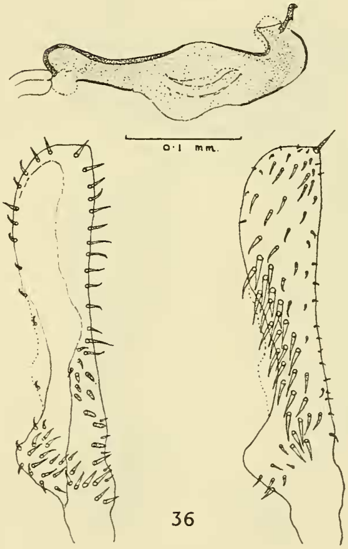

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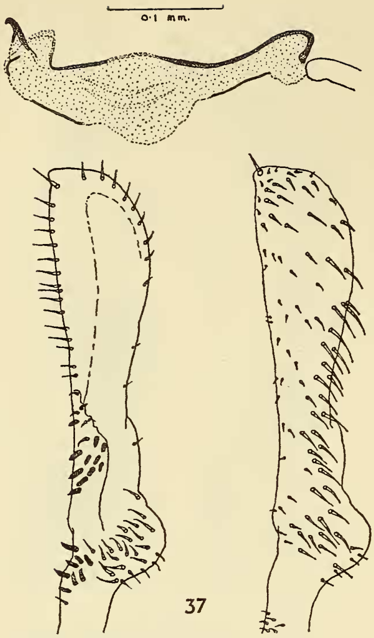

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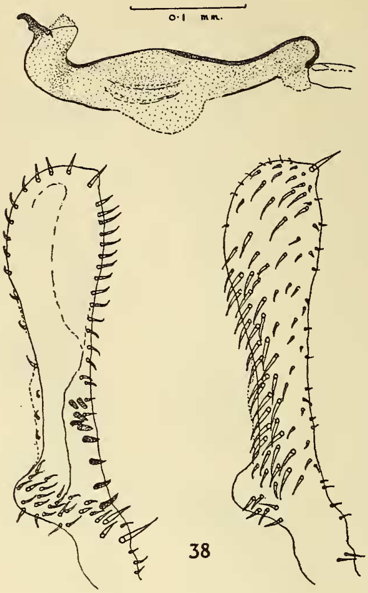

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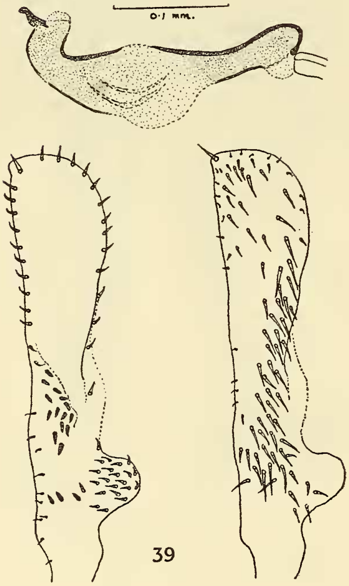

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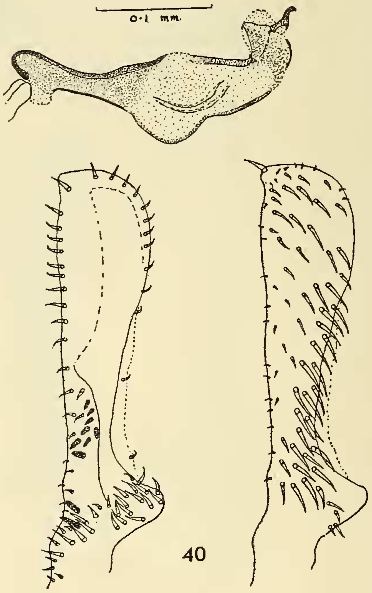

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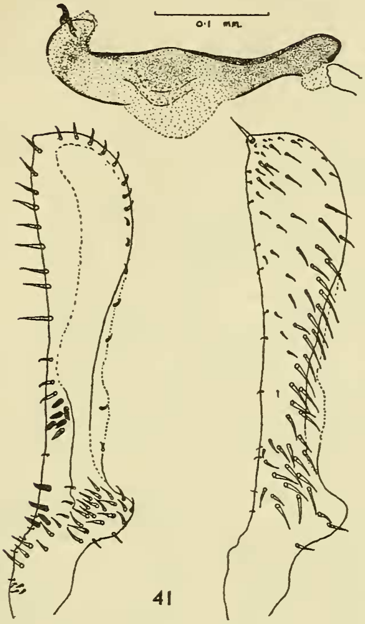

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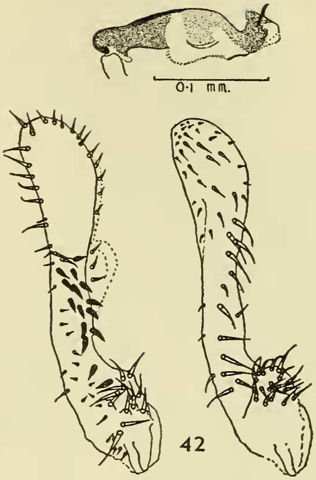

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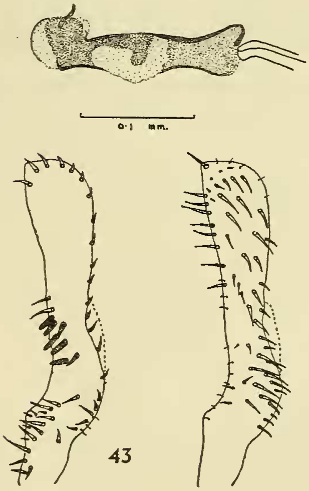

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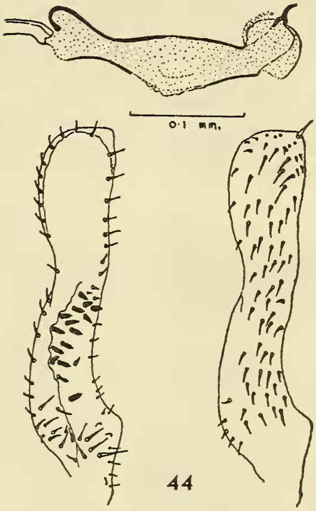

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(For explanation of figures, see page 266)

Subgenus *Glycaspis*

Glycaspis (*Alloglycaspis*) Moore 1961, pp. 129-132, 148-166, Text-figs. 1 to 4, 24 to 48, Pl. vii, figs. 5 to 10. *syn. nov.*

Type Species: *Glycaspis* (*Glycaspis*) *flavilabris* (Froggatt), designated Taylor, 1960 (non *Glycaspis* (*Alloglycaspis*) *baileyi* Moore 1961).

Type Locality: Rylstone, New South Wales.

Host Plant: *Eucalyptus goniocalyx* F. Muell. ex Miq. (bundy).

This, the largest subgenus, is considered to be of intermediate phylogeny to the subgenera *Synglycaspis and Boreioglycaspis.*

The 79 species contained in it, construct round, oval and rectangular lerps, and its species are distributed throughout Australia, and in New Guinea.

Various taxonomic arrangements of species in *Glycaspis* (*Glycaspis*) were considered, and the arrangement adopted is that considered to be most utilitarian for the future identification of species.

The taxonomic arrangement is, as with the previous subgenus, mainly based on the lerp shape, although consideration of the clasper shape has been of importance within each lerp-shape group. The length and shape of vein Cu_1 of the hindwing is variable, but this character combined with those mentioned above, provides a basis for grouping the species constructing round lerps.

Progression from the primitive "scimitar" shape of the claspers, and a progressive extension of the basal prominence on the claspers, together with a narrowing of the median area, is evident in the round and oval lerp-forming groups.

The general similarities of claspers of the species are also utilised to interpret the sequence in this subgenus. Such an arrangement has permitted the retention of most species within their respective groups indicated by the hindwing vein Cu_1, i.e. the length of Cu_1, from 0.047mm. to 0.115mm. indicates primitive species (Group (i)); 0.115mm. to 0.162mm. the intermediate species (Group (ii)); 0.162mm. to 0.207mm. the recent species (Group (iii)).

The taxonomic arrangement is commenced with three round lerp-forming primitive species showing similarities in the aedeagi, which, together with the length of the M+Cu stem in the forewing, suggest species of close affinities. These three species indicate three separate lines of evolutionary divergence in *Glycaspis* (*Glycaspis*).

The sequence of round lerp-forming species continues, to include Text-fig. 102; oval lerp-forming species are illustrated in Text-figs. 103 to 118; rectangular lerp-forming species, Text-figs. 119 to 123.

Glycaspis (*Glycaspis*) *flavilabris* (Froggatt)

Aphalara flavilabris Froggatt 1903, pp. 318-9, Pl. 4, fig. 3.
Spondyliaspis flavilabris: Tuthill & Taylor 1955, p. 231.
Glycaspis flavilabris: Taylor 1960, p. 385.
Glycaspis (*Glycaspis*) *flavilabris* Moore 1961, pp. 133, 148.

General Colour: Variable amounts of pale cream, yellow, black or brown.
Claspers & Aedeagus: As in Text-fig. 45.
Length of Aedeagus: (5 specimens) 0.288 mm. to 0.320 mm.
Hindwings: Cu_1 as Group (i).
Host Plant: *Eucalyptus goniocalyx* F. Muell. ex Miq. (bundy).
Type Locality: Rylstone, New South Wales.
Types: Unique Holotype female dried specimen labelled "Rylstone, N.S.W., Sweeping, 7.2.'01, Type, *Aphalara flavalabris* n.sp., Rylstone, N.S.W., Holotype".
Other Specimens Examined: (slides) 1♂ "Tharwa Rd., A.C.T., 23 xii 1954, E. E. Lewis, *E. elaeophora*"; 1♂ "Kambah Rd., A.C.T., 14 xii 1954, E. E. Lewis, *E. elaeophora*"; 1♂ "Kambah Rd., A.C.T., 31 xii 1954, F. Wheelhouse, *E. elaeophora*"; 2♂s "Mullion Ra. S.F., N.S.W., 12 iii 1969, *E. goniocalyx*". (in alcohol) 5♂s 18♀s "Mullion Ra. S.F., N.S.W., 12 iii 1969, *E. goniocalyx*". (dried spcs.). 1♂ 1♀ "Tharwa Rd., A.C.T., 23 xii 1954, E. E. Lewis, *E. elaeophora*"; 1♀ "Kambah Rd., A.C.T., 14 xii 1954, E. E. Lewis, *E. elaeophora*"; 1♂ 2♀s

"Kambah Rd., A.C.T., 31 xii 1954, F. Wheelhouse, *E. elaeophora*"; 1♀ with same label data, but date "23 xi 1954"; 1♀ with same label data, but date 6 xii 1954; 1♀ and lerp with same label data, but date "17 iii 1955".

Notes: Lerps round. This species was designated the type-species of the genus *Glycaspis* by Taylor, 1960. The Holotype female specimen, and its associated label data, have been compared with Froggatt's original description of *G. flavilabris,* and in the opinon of the writer, there is no doubt that his description was based on this specimen. The specimen bears 3 labels, with the data given above, which distinguish it as the Holotype.

The specimen has been moved from its original bedding of gum on the card, and portions of some legs and one forewing are in the centre of the card, with the specimen towards one edge of the card. One antenna, one forewing and one hindwing are missing. The specimen has been compared with the series of 12♂s and 25♀s mentioned above, and which are considered by the writer to be specimens of *G. flavilabris.* The aedeagus and claspers of a male specimen of this series are illustrated in Text-fig. 45. This species may be separated from all other species in the subgenus *Glycaspis,* by the short stem of M+Cu, and the coloration of the forewing (Text-fig. 133), and from all other species in the subgenus *Synglycaspis* by the shape of Cu$_1$ of the hindwing.

Although intensive collections were made to locate this species at Rylstone, the type locality, on four different occasions, no specimens were obtained.

Glycaspis (*Glycaspis*) *eucalypti* (Dobson)

Psylla eucalypti Dobson 1851, pp. 235-239, Pl. 18, figs. 1 to 4.
Spondyliaspis eucalypti (?): Schwarz 1898, pp. 69-71, *non Dobson.*
Spondyliaspis eucalypti: Froggatt 1900, pp. 289-291, Pl. 12, figs. 1 & 12, Pl. 13, fig. 5, Pl. 14, fig. 7, *non Dobson.*
Glycaspis eucalypti: Taylor 1960, p. 385, Pl. 1, fig. 2.
Glycaspis eucalypti: Moore 1961, p. 132.

General Colour: Yellow with dark marks; abdomen bright green on living or dried specimens.
Claspers & Aedeagus: As in Text-fig. 46.
Length of Aedeagus: (20 specimens) 0.239 mm. to 0.277 mm.
Hindwings: Cu$_1$ as Group (i).
Host Plants: *E. viminalis* Labill. (ribbon gum); *E. rodwayi* R. T. Bak. & H. G. Sm. (black gum); *E. ?dalrympleana* Maiden (broad-leaved kindling bark); *E. ?ovata* Labill. (swamp gum).
Type: Neotype (here designated) 1 male on slide labelled "*Glycaspis* (*Glycaspis*) *eucalypti* (Dobson), Neotype, Domain, Hobart, Tas., 31 x 1959, K. L. Taylor, Bred from *E. viminalis*".
Other Specimens Examined: (slides) 4♂s "Domain, Hobart, Tas., 16 xii 1966, *E. viminalis*"; 3♂s "35 mi. W. Scottsdale, Tas., 29 xii 1966, *E. ?ovata*"; 1♂ "1 mi. E. Belchers, Tas., 12 xii 1966, *E. ?ovata*"; 1♂ "Apsley Riv., Tas., 28 xii 1966, *E. ?ovata*"; 1♂ "6 mi. N. Ellendale, Tas., 11 xii 1966, *E. viminalis*"; 3♂s "12 mi. N. Geehi, N.S.W., 8 i 1967, *E. ?viminalis*"; 2♂s "18 mi. E. Derwent Bge., Tas., 10 xii 1966, *E. rodwayi*"; 3♂s "14 mi. S. Kiandra, N.S.W., 11 i 1967, *E. ?dalrympleana*"; 1♂ "11 mi. E. Derwent Bge., Tas., 10 xii 1966, *E. ?obliqua*". (in alcohol) 2♂s 1♀ "Domain, Hobart, Tas., 16 xii 1966, *E. viminalis*"; 1♂ 1♀ "6 mi. N. Ellendale, Tas., 11 xii 1966, *E. viminalis*"; 1♀ "Apsley Riv., Tas., 28 xii 1966, *E. ?ovata*"; 1♂ 1♀ 35 mi. W. Scottsdale, Tas., 29 xii 1966, *E. ?ovata*"; 1♀ "Imi. E. Cygnet, Tas., 18 xii 1966, *E. ?ovata*"; 1♀ "5 mi. S. Cygnet, Tas., 18 xii 1966, *E. ?viminalis*"; 5♂s 17♀s "18 mi. E. Derwent Bge., Tas., 10 xii 1966, *E. rodwayi*"; 1♂ 5♀s "14 mi. S. Kiandra, N.S.W., 11 i 1967, *E. ?dalrympleana*". (dried) 2♂s 9♀s

1 lerp, with same label data as the Neotype. A series of 9 lerps on 6 pins accompanies these specimens, and bears the same label data as the specimens. The lerps were associated with the series of adults (personal communication, Taylor 1969).

Notes: Lerps round. This species, originally described and placed in the genus *Psylla* by Dobson, was collected by him in the Domain, Hobart, Tas., during or prior to 1851. After extensive enquiries, Taylor (1960, p. 385) records that Dobson's type specimens apparently do not exist. Taylor reared several specimens from round lerps occurring on *E. viminalis* in the type locality. A male specimen of this series has been selected as Neotype to represent Dobson's species *G. eucalypti,* and has been placed on a side as a whole mount, dissected to show the claspers and aedeagus. During December, 1966, the Domain (particularly the area adjacent to where the High School was once located and with which Dobson was associated) was twice visited by the writer, and many intensive collections of *Glycaspis* spp. were made. It was found that the "stunted gum bushes" referred to by Dobson, could be represented by three *Eucalyptus* spp., namely E. *globulus, E. viminalis* or *E. linearis.*

On an examination of the *Glycaspis* spp. obtained from these three hosts, the species constructing round lerps on *E. viminalis* was selected to represent Dobson's *G. eucalypti.* This choice is in accordance with that by Taylor (1960, p. 385) and as indicated on specimens in the National Insect Collection, C.S.I.R.O., Canberra, which Taylor reared from *E. viminalis* growing in the Domain, Hobart, Tasmania. As many species of *Glycaspis* construct lerps similar to that described and figured by Dobson, little assistance in the selection of a specimen to represent his *G. eucalypti* could be gained from his information concerning the shape of the lerps, apart from the general shape, which is round. On present knowledge, his description is inadequate to allow undoubted recognition of his species. However, minor indications which have guided the selection of representative specimens are given in his paper. The dark markings on the scutum of the selected species appear to be as those shown by Dobson in his Fig. 4, and the "rich emerald green" of the abdomens of those specimens constructing round lerps on *E. viminalis* appear to indicate his *G. eucalypti.* Specimens considered by Froggatt to be *G. eucalypti,* and Schwarz's *G. eucalypti*(?), are not conspecific with Dobson's *G. eucalypti.* The limitations and conditions of the I.C.Z.N. Code (1961, pp. 81, 83) are satisfied in the selection of the Neotype representing Dobson's *G. eucalypti* and are recorded categorically:-

Article 75. No holotype, lectotype or syntype exists.

(a) The Neotype is designated in a Revision, as is required, and is necessary in the interests of stability of nomenclature.

(i) This course is essential for solving a complex problem of confused and doubtful identities of closely similar species.

(b) The Neotype is not designated for its own sake, or as a matter of curatorial routine.

(c) The designation of the Neotype of *G. eucalypti* is validated by publication of the following qualifying particulars:-

(1) Characters differentiating the taxon *G. eucalypti* are:- The morphology of the male claspers and aedeagus as represented in Text. fig. 46; the length of the latter character; the "rich emerald green" of the abdomens of live or dried specimens; the construction of round lerps by this species; the determination of its host plant, *E. viminalis.*

(2) The type locality and host association, together with the illustration of the male claspers and aedeagus, ensure recognition of the species designated.

(3) Taylor's enquiries concerning the original type material were made to The British Museum (Nat. Hist.), London; The Australian Museum, Sydney, N.S.W.; The Tasmanian Museum, Hobart, Tasmania; the Tasmanian Department of Agriculture, Hobart. No specimens recognised by the writer as possibly Dobson's species were loaned for this Revision from any of the Institutions mentioned in the "Acknowledgments" in this paper.

(4) The Neotype taxon constructs round lerps; dark markings on the scutum compare with Dobson's fig. 4; the abdomens are "rich emerald green", as recorded by Dobson.

(5) The Neotype came from the original type locality given by Dobson, i.e. The Domain, Hobart.

(6) The Neotype is lodged with the National Insect Collection, C.S.I.R.O., Canberra, A.C.T., together with all of the specimens previously enumerated under "Other Specimens Examined". Recommendation 75A. The proposed Neotype designation has been discussed with Mr. K. L. Taylor, taxonomist of the Psyllidae, and Dr. K. H. L. Key, Curator of Insects and Taxonomist, both of the C.S.I.R.O., Canberra.

Glycaspis (*Glycaspis*) *minuscula,* comb. nov.

Glycaspis (*Alloglycaspis*) *minuscula* Moore 1961, p. 153, Text-fig. 31.

General Colour: Cream to yellow; dark dorsal & ventral markings.
Claspers & Aedeagus: As in Text-fig. 47.
Length of Aedeagus: (9 specimens) 0.248 mm. to 0.272 mm.
Hindwings: Cu_1 as Group (i).
Host Plants: *E. cinerea* F. Muell. (Argyle apple); *E. rubida* Deane & Maiden (candle-bark gum); *E. cephalocarpa* Blakely (long-leaved Argyle apple): *E. ?viminalis* Labill. (ribbon gum).
Type Locality: 26 mi. N. Goulburn, N.S.W.
Specimens Examined: (slides) 2♂s 1♀ "26 mi. N. Goulburn, N.S.W., 29 iv 1964, *E. cinerea"*; 1♂ "26 mi. N. Goulburn, N.S.W., 19 i 1967, *E. cinerea*"; 4♂s "Olinda Crk., Vic., 27 xi 1966, *E. rubida"*; 1♂ "Olinda Crk., Vic., 27 xi 1966, *E. ?viminalis"*; 1♂ "1 mi. N.E. Montrose, Vic., 27 xi 1966, *E. cephalocarpa"*; 1♂ "Emerald (?Vic.), 16 v 1907". (in alcohol) 9♂s 22♀s "26 mi. N. Goulburn, N.S.W., 19 i 1967, *E. cinerea"*; 10♂s 7♀s with same label data but date "29 iv 1964"; 2♂s "Olinda Crk., Vic., 27 xi 1966, *E. ?viminalis*"; 6♂s 21♀s with same label data but host *"E. rubida"*; 3♂s 18♀s "1 mi. N.E. Montrose, Vic., 27 xi 1966, *E. cephalocarpa"*.
Notes: Lerps round. Venation of the forewing approaches that of specimens in the subgenus *Synglycaspis,* but less so than that of *G. flavilabris* or *G. eucalypti.*

Glycaspis (*Glycaspis*) *egregia,* sp. nov.

(L. *egregius* = surprising)

General Colour: Pale brown lightly marked with black; white to yellow dorsal median stripe from anterior of vertex to anterior of abdomen; variable red suffusion. Dark markings on forewings of the male are illustrated in Text-fig. 134.
Claspers & Aedeagus: As in Text-fig. 48.
Length of Aedeagus: (4 specimens) 0.236 mm. to 0.254 mm.
Hindwings: Cu_1 as Group (i).
Host Plant: *E. moluccana* Roxb. (grey box).
Type Locality: 3 mi. W. Calliope, on Callide Rd., Queensland.
Types: Holotype male on slide labelled "3 mi. W. Calliope, Qld., 23 iv 1966, *E. moluccana*". Paratypes: (slides) 2♂s with same label data as the holotype; 1♂ "Brisbane, Qld., 2 x 1957, K. L. Harley". (in alcohol) 7♂s 17♀s 15 nymphs with same label data as the holotype. (dried) 2♂s and lerp "Brisbane, Qld., 2 x 1957, K. L. Harley".
Notes: Lerps round. Wing coloration of this species is similar to that of *G. flavilabris,* but the dark area extends on to the pterostigma. Specimens were reared from lerps by the writer.

Glycaspis (*Glycaspis*) *cnecosia,* sp. nov.

(Gr. *knekos* = pale yellow; *-ia* = state of being)

General Colour: Pale yellow with dark marks; abdomen suffused green.
Claspers & Aedeagus: As in Text-fig. 49.
Length of Aedeagus: (2 specimens) 0.252 mm. to 0.279 mm.
Hindwings: Cu_1 as Group (i).
Host Plant: *E. cambageana* Maiden (Coowarra box).
Type Locality: 17 mi. N. Banana, Queensland (Rannes Rd.).
Types: Holotype male on slide labelled "17 mi. N. Banana, Qld., 25 iv 1966, *E. cambageana*". Paratypes: (slide) 1♂ with same label data. (in alcohol) 3♂s 10♀s with same label data.
Notes: Lerps round, always at base of leaf and in compact groups. Some adults were reared by the writer.

Glycaspis (*Glycaspis*) *suavis,* comb. nov.

Glycaspis (*Alloglycaspis*) *suavis* Moore 1961, p. 155, Text-fig. 33.

Claspers & Aedeagus: As in Text-fig. 50.
Length of Aedeagus: (7 specimens) 0.203 mm. to 0.227 mm.
Hindwings: Cu_1 as Group (i).
Host Plants: *E. populnea* F. Muell. (bimble box); *Eucalyptus* sp. (box).
Type Locality: Strahorn State Forest, N.S.W.
Specimens Examined: (slides) 7♂s "24 mi. S.E. Gayndah, Qld., 21 iv 1966, *E. populnea*"; 5♂s "11 mi. N.W. Mt. Carbine, Qld., 16 v 1966, *Euc.* sp. (box); 1♂ "61 mi. N. Clermont, Qld., 2 v 1966, *E. ?populnea*"; 1♂ "60 mi. N. Mitchell, Qld., 7 xi 1952, A. L. Dyce, *E. populnea*". (in alcohol) several ♂s ♀s "24 mi. S.E. Gayndah, Qld., 21 iv 1966, *E. populnea*"; 1♂ 2♀s "118 mi. N. Clermont, Qld., 2 v 1966, *Euc.* sp. (box); several ♂s ♀s "61 mi. N. Clermont, Qld., 2 v 1966, *E. populnea*"; 10♂s 20♀s "11 mi. N.W. Mt. Carbine, Qld., 16 v 1966, *Euc.* sp. (box)"; 1♀ "4 mi. N.E. Hillston, N.S.W., 25 i 1967, *E. populnea,* reared ex round lerps, emgd. 26 i 1967". (dried) 5♀s "60 mi. N. Mitchell, Qld., 7 xi 1952, A. L. Dyce, *E. populnea*".
Notes: Lerps round.

Glycaspis (*Glycaspis*) *buxalis,* sp. nov.

(L. *buxus* = the box tree; *-alis* = pertaining to)

General Colour: Yellow, with variable dark markings.
Claspers & Aedeagus: As in Text-fig. 51.
Length of Aedeagus: (24 specimens) 0.193 mm. to 0.221 mm.
Hindwings: Cu_1 as Group (i).
Host Plants: *E. microtheca* F. Muell. (flooded box); *E. ?intertexta* R. T. Bak. (gum-barked coolabah); *E. ?melanophloia* F. Muell. (silver-leaved ironbark).
Type Locality: 102 mi. E. X-roads (Darwin-Mt. Isa), Northern Territory.
Types: Holotype male on slide labelled "102 mi. E. X-roads, N.T., 10 iv '66, *E. microtheca*". Paratypes: (slides) 4♂s with same label data as the holotype; 5♂s "67 mi. N.E. Pt. Hedland, W.A., 29 vii 1966, *E. microtheca*"; 4♂s "8 mi. S.W. DeGrey Riv., W.A., 30 vii 1966, *E. ?microtheca*"; 3♂s "14 mi. S.W. Pt. Hedland, W.A., 30 vii 1966, *E. ?microtheca*"; 2♂s "2 mi. E. Millstream, W.A., 3 viii 1966, *E. ?intertexta*"; 1♂ "32 mi. S. Roy Hill, W.A., 10 viii 1966, *E. ?microtheca*"; 4♂s "131 mi. N. Clermont, Qld., 2 v 1966, *E. ?melanophloia*"; 1♂ "107 mi. N. Clermont, Qld., 2 v 1966, *E. microtheca*". (in alcohol) 20♂s 20♀s "102 mi. E. X-roads, N.T., 10 iv 1966, *E. microtheca*"; 7♂s 9♀s "8 mi. S.W. DeGrey Riv., W.A., 30 vii 1966, *E. ?microtheca*"; 3♂s 9♀s "14 mi. S.W. Pt. Hedland, W.A., 30 vii 1966, *E. ?microtheca*"; 1♂ 2♀s "2 mi. E. Millstream, W.A., 3 viii 1966, *E. ?intertexta*"; 4♂s 4♀s "67 mi. N.E. Pt. Hedland, W.A., 29 vii 1966, *E. microtheca*"; 3♂s 7♀s "131 mi. N. Clermont, Qld., 2 v 1966, *E. ?melanophloia*"; 1♀ "32 mi. S. Roy Hill, W.A., 10 viii 1966, *E. ?microtheca*".

Notes: Lerps ? round. This species with short genal processes appears to come within the *occidentalis* group of species. Lerps occur on stems, leaves and twigs of the host plant. The short genal processes distinguish this species from *G. retrusa*, sp. nov.

Glycaspis (*Glycaspis*) *retrusa*, sp. nov.

(L. *retrusus* = hidden, concealed)

General Colour: Yellow with variable dark markings; some females with distinctive coloration similar to that given in Text-fig. 132. Abdomens retain green coloration in alcohol.
Claspers & Aedeagus: As in Text-fig. 52.
Length of Aedeagus: (21 specimens) 0.198 mm. to 0.250 mm.
Hindwings: Cu_1 as Group (i).
Host Plants: *E. microtheca; E. largiflorens* F. Muell. (river black box); *E. leptophleba* F. Muell. (bastard gum-leaved box); *E. ?tectifica* F. Muell. (Macarthur River Box).
Type Locality: Roper Bar, Roper River, Northern Territory.
Types: Holotype male on slide labelled "Roper Bar., N.T., 17 vi 1966, *E. microtheca* or *E. tectifica*". Paratypes: (slides) 1♂ "23 mi. W. Camooweal, N.T., 9 vi 1966, *E. ?microtheca*"; 2♂s "5 mi. S. Dunmarra, N.T., 13 vi 1966, *E. microtheca* or *E. tectifica*"; 5♂s "Roper Bar, N.T., 18 vi 1966, *E. microtheca* or *E. tectifica*"; 2♂s with same label data as the holotype; 3♂s 1♀ "Victoria Riv. X-ing, N.T., 7 vii 1966, *E. microtheca* or *E. tectifica*". (in alcohol) 6♂s 5♀s "5 mi. S. Dunmarra, N.T., 13 vi 1966, *E. microtheca* or *E. tectifica*"; 8♂s 10♀s "Roper Bar, N.T., 18 vi 1966, *E. microtheca* or *E. tectifica*"; 13♀s with same label data; 7♂s 3♀s "Victoria Riv. X-ing, N.T., 7 vii 1966, *E. microtheca* or *E. tectifica*"; *Females with distinctive coloration*: (in alcohol) 2♀s "Gunbar, N.S.W., 24 i 1967, *E. ?largiflorens*"; 1♀ "3 mi. S. Hillston, N.S.W., 25 i 1967, *E. largiflorens*"; 4♀s "2 mi. N.E. Hillston, N.S.W., 25 i 1967, *E. largiflorens*"; 2♀s "Willandra Crk., N.S.W., 26 i 1967, *E. ?largiflorens*"; 2♀s "Paroo Riv., N.S.W., 29 viii 1967, *E. ?microtheca*"; 2♀s "45 mi. W. Moree, N.S.W., 26 viii 1967, *E. microtheca*"; 1♀ "3 mi. W. Moree, N.S.W., 26 viii 1967, *E. microtheca*"; 1♀ "Tibooburra Crk., N.S.W., (Mt. Wood H.S.), 30 viii 1967, *E. microtheca*"; 1♀ "ca. 1 mi. N. Rannes, Qld., 25 iv 1966, *E. microtheca*"; 4♀s "6 mi. N. Emerald, Qld., 30 iv 1966, *E. microtheca*"; 1♀ "13 mi. N.W. Mt. Molloy, Qld., 12 v 1966, *E. leptophleba*"; 2♀s "119 mi. S. Normanton, Qld., 29 v 1966, *E. microtheca*"; 3♀s "5 mi. N.W. Mt. Isa, Qld., 8 vi 1966, *E. microtheca*"; 4♀s "23 mi. W. Camooweal, Qld., 9 vi 1966, *E. ?microtheca*"; 4♀s "5 mi. S. Dunmarra, N.T., 13 vi 1966, *E. microtheca* or *E. tectifica*"; 13♀s "Victoria Riv. X-ing, N.T., 7 vii 1966, *E. microtheca* or *E. tectifica*". (dried) 5♀s "30 mi. S. Bourke, N.S.W., 25 x 1957, I. F. B. Common"; 2♀s "27 mi. E. Cobar, N.S.W., 27 x 1957, I. F. B. Common"; 1♀ "Walgett, N.S.W., 15 x 1957, I. F. B. Common"; 1♀ "Hebel, Qld., 16 x 1957, I. F. B. Common"; 1♀ "Werna Crk., 30 mi. N.W. Winton, Qld., 6 viii 1963, T. E. Woodward", to QU.
Other Specimens Examined: (slides) (on slide with *G. anomala*) 1♂ "6 mi. N. Emerald, Qld., 30 iv 1966, *E. microtheca*".

Glycaspis (*Glycaspis*) *pervagata*, sp. nov.

(L. *pervagatus* = widespread)

General Colour: Pale yellow to orange; few dark marks with red suffusion.
Claspers & Aedeagus: As in Text-fig. 53.
Length of Aedeagus: (20 specimens) 0.230 mm. to 0.263 mm.
Hindwings: Cu_1 as Group (i).
Host Plants: *E. dumosa* A. Cunn. ex Schau. (congoo mallee); *E. incrassata* Labill. (lerp mallee); *E. gracilis* F. Muell. (yorrell); *E. ?foecunda* Schau. (slender-leaved white mallee); *E. striaticalyx* W. V. Fitzg. (Cue york gum); *E. lesouefii* Maiden (LeSouef's blackbutt); *E.*

torquata Luehm. (coral gum); *E. brachycalyx* Blakely (gilja); *E. ?griffithsii* Maiden (Griffith's grey gum); *E. ?dongarraensis* Maiden & Blakely (Dongarra mallee); *E. ?salmonophloia* F. Muell. (salmon gum); *E. ?calycogona* Turcz. (gooseberry mallee).

Type Locality: 2 mi. W. Goolgowie, New South Wales.

Types: Holotype male on slide labelled "2 mi. W. Goolgowie, N.S.W., 25 i 1967, *E. dumosa*". Paratypes: (slides) 2♂s with same label data as the holotype; 1♂ "3 mi. N. Karoonda, S.A., 13 xi 1966, *E. pileata-dumosa* complex"; 1♂ "Alawoona, S.A., 12 xi 1966, reared from *E. pileata* complex, emgd. 17 xi 1966"; 3♂s "Broad Arrow, W.A., 3 x 1966, *E. ?griffithsii*"; 1♂ "29 mi. S. Coolgardie, W.A., 8 x 1966, *E. ?griffithsii*"; 1♂ "4 mi. S. Geraldton, W.A., 20 viii 1966, *E. ?dongarraensis*"; 1♂ "4 mi. S. Nannine, W.A., 13 viii 1966, *E. striaticalyx*"; 1♂ "2.5 mi. S. Menzies, W.A., 1 x 1966, *E. lesouefii*"; 1♂ "44 mi. S. Menzies, W.A., 2 x 1966, *E. ?lesouefii*"; 1♂ "3 mi. S. Kalgoorlie, W.A., 5 x 1966, *E. ?lesouefii*"; 1♂ "Kalgoorlie, W.A., 4 x 1966, bred from *E. torquata* street trees"; 1♂ "29 mi. S. Coolgardie, W.A., 8 x 1966, *E. torquata*"; 1♂ "Paruna, S.A., 1 ii 1965, G. Howard, *E. incrassata*", to SM; 3♂s "20 mi. N. Norseman, W.A., 10 x 1966, *E. gracilis*". (in alcohol) 9♀s "4 mi. S. Nannine, W.A., 13 viii 1966, *E. striaticalyx*"; 1♀ "7 mi. along Casuarinas Rd., (45 mi. Geraldton), W.A., 18 viii 1966, *E. ?dongarraensis*"; 1♀ "4 mi. S. Geraldton, W.A., 20 viii 1966, *E. ?dongarraensis*"; 1♀ "29 mi. S. Coolgardie, W.A., 8 x 1966, *E. ?griffithsii*"; 1♀ "5 mi. N. Coolgardie, W.A., 7 x 1966, *E. torquata*"; 1♀ 9 nymphs "Kalgoorlie, W.A., *E. torquata*, bred from street trees"; 4♂s 16♀s 6 nymphs "3 mi. S. Kalgoorlie, W.A., 5 x 1966, *E. ?lesouefii*"; 19♀s "44 mi. S. Menzies, W.A., 2 x 1966, E. *?lesouefii*"; 1♀ "2.5 mi. S. Menzies, W.A., 1 x 1966, E. *lesouefii*"; 8♂s 9♀s 6 nymphs "Broad Arrow, W.A., 3 x 1966, *E. ?griffithsii*"; 1♂ 3♀s "29 mi. S. Coolgardie, W.A., 8 x 1966, *E. ?griffithsii*"; 1♀ "4 mi. S. Coolgardie, W.A., 7 x 1966, *E. ?griffithsii* or *E. salmonophloia*"; 4♀s "44 mi. S. Menzies, W.A., 2 x 1966, *E. lesouefii*"; 9♀s "3 mi. S. Kalgoorlie, W.A., 5 x 1966, *E. ?calycogona*"; 1♀ "Keith, S.A., 15 viii 1963, T. C. R. White, *E. incrassata*, Rearing No. 17E, emgd. 2 ix 63", to SM; 1♀, nymph, lerps, "Paruna, S.A., 1 ii 1965, G. Howard, *E. incrassata*", to SM; 2♂s 3♀s "2 mi. W. Goolgowie, N.S.W., 25 i 1967, *E. dumosa*"; 2♂s 8♀s "20 mi. N. Norseman, W.A., 10 x 1966, *E. gracilis*"; 2♀s "3 mi. N. Karoonda, S.A., 13 xi 1966, *E. pileata-dumosa* complex".

Other Specimens Examined: 1♀ "10 mi. N. Mannum, S.A., 11 xi 1966, *E. brachycalyx*".

Glycaspis (*Glycaspis*) *repentina*, comb. nov.

Glycaspis (*Alloglycaspis*) *repentina* Moore 1964, pp. 148-150, Text-fig. 4.

Claspers & Aedeagus: As in Text-fig. 54.

Length of Aedeagus: (20 specimens) 0.164 mm. to 0.191 mm.

Hindwings: Cu_1 as Group (i).

Host Plants: *E. oleosa* F. Muell. ex Miq. (giant mallee); *E. porosa* F. Muell. *in* Miq. (black mallee box); *E. ?foecunda; E. ?leucoxylon* F. Muell. (white ironbark).

Type Locality: Loxton, South Australia.

Specimens Examined: (slides) 2♂s "Lerps on mallee, adults 12 xii 1892", to SM; 1♂ "3 mi. S. Pt. Wakefield, S.A., 25 x 1966, *E. porosa*"; 6♂s "Lowaldie, S.A., 13 xi 1966, *E. ?foecunda*"; 4♂s "Glossop, S.A., 20 v 1966, R. H. Brewer, *Euc.* sp.", to SI. (in alcohol). 130♂s 130♀s "Lowaldie, S.A., 13 xi 1966, *E. ?foecunda*"; 30♂s 30♀s "Alawoona, S.A., 12 xi 1966, *E. ?oleosa*"; 11♂s 2♀s "6 mi. W. Mannum, S.A., 11 xi 1966, *E. ?oleosa*"; 2♂s 9♀s "6 mi. N. Mannum, S.A., 11 xi 1966, *E. ?oleosa*"; 1♂ 5♀s "Tintinara, S.A., 14 xi 1966, *E. ?leucoxylon*". (Dried) 2♀s "Glossop, S.A., 20 v 1966, R. H. Brewer, *Euc.* sp.", to SI; 1♀ 2 nymphs "Lerps on mallee, adults, 12 xii 1892", to SM.

Notes: Lerps round, on leaves and young shoots.

Glycaspis (*Glycaspis*) *collina*, sp. nov.

(L. *collinus* = hill loving)

General Colour: Yellow suffused red, with dark marks.
Claspers & Aedeagus: As in Text-fig. 55.
Length of Aedeagus: (4 specimens) 0.248 mm. to 0.256 mm.
Hindwings: Cu_1 as Group (i).
Host Plant: *E. melanophloia*.
Type Locality: 36 mi. W. Rockhampton, Queensland.
Types: Holotype male on slide labelled "36 mi. W. Rockhampton, Qld., 28 iv 1966, *E. ?melanophloia*". Paratypes: (slides) 1♂ "3 mi. N. Clermont, Qld., 1 v 1966, *E. melanophloia*"; 2♂s "24 mi. S.E. Gayndah, Qld., (Kilkivan Rd.), 21 iv 1966, *E. melanophloia*". (in alcohol) 2♀s with same label data as the holotype; 2♀s "3 mi. N. Clermont, Qld., 1 v 1966, *E. melanophloia*"; 1♀ "24 mi. S.E. Gayndah, Qld., 21 iv 1966, *E. melanophloia*".
Notes: Lerps ? oval.

Glycaspis (*Glycaspis*) *brunneincincta*, sp. nov.

(L. *brunneus* = dark brown; *incincta* = encircled)

General Colour: Male, cream to yellow; Female, as male but predominantly chocolate-brown.
Claspers & Aedeagus: As in Text-fig. 56.
Length of Aedeagus: (3 specimens) 0.230 mm. to 0.252 mm.
Hindwings: Cu_1 as Group (i).
Host Plants: *E. major* (Maiden) Blakely (bastard bangalay), or *E. propinqua* Deane & Maiden (small fruited grey gum); *?E. tessellaris* F. Muell. (carbeen).
Type Locality: 4.5 mi. N.E. Plunkett, Queensland.
Types: Holotype male on slide labelled "4.5 mi. N.E. Plunkett, Qld., 13 iv 1966, *E. major* or *E. propinqua*". Paratypes: (slides) 2♂s with same label data. (in alcohol) 5♂s 9♀s, nymphs, with same label data; 1♂ 4♀s "17 mi. N. Banana, Qld., 25 iv 1966, *E. ?cambageana*"; 1♀ "10 mi. N.E. Callide, Qld., 24 iv 1966, *?E tessellaris*".
Notes: Lerps round. Some adults were reared.

Glycaspis (*Glycaspis*) *dobsoni*, sp. nov.

(Named to honour Mr. Thomas Dobson who, during 1851, collected, and gave the earliest description of, a species in this genus).

General Colour: Yellow and orange-red, marked with black.
Claspers & Aedeagus: As in Text-fig. 57.
Length of Aedeagus: (2 specimens) 0.286 mm. and 0.309 mm.
Hindwings: Cu_1 as Group (ii).
Host Plant: *E. viminalis*.
Type Locality: Domain, Hobart, Tasmania.
Types: Holotype male on slide labelled "Domain, Hobart, Tasmania, 17 xii 1966, *E. viminalis*". Paratypes: (slide) 1♂ "Domain, Hobart, Tas., 31 x 1959, K. L. Taylor, Bred from *E. viminalis*. (in alcohol) 3♀s with same label data as the holotype; 2♀s "5 mi. S. Cygnet, Tas., 18 xii 1966, *E. ?viminalis*". (dried) 3♀s "Domain, Hobart, Tas., 31 x 1959, K. L. Taylor, *E. viminalis*.
Notes: Lerps round to oval. Accompanying the latter 3♀s is a series of 11 lerps on 8 pins with the same label data. The lerps were associated with the series of adults (personal communication Taylor 1969).

Glycaspis (*Glycaspis*) *hadlingtoni*, sp. nov.

(Named for my colleague, Mr. P. Hadlington, who provided opportunities in the form of many projects, for the writer to express personal capabilities over many years).

General Colour: Cream to yellow, with or without dark markings.

Claspers & Aedeagus: As in Text-fig. 58.
Length of Aedeagus: (2 specimens) 0.245 mm., 0.263 mm.
Hindwings: Cu_1 as Group (i).
Host Plant: *E. intertexta.*
Type Locality: 28 mi. E. Cobar, New South Wales.
Types: Holotype male on slide labelled "28 mi. E. Cobar, N.S.W., 27 i 1967, *E. intertexta*". Paratypes: (slides) 1♂ "1.5 mi. E. Cobar, N.S.W., 6 ix 1967, *E. intertexta*"; 2♂s "Willandra Crk., N.S.W., 26 i 1967, *E. ?largiflorens*"; 3♂s "2 mi. N.E. Hillston, N.S.W., 25 i 1967, *E. ?largiflorens*". (in alcohol) 9♀s "1.5 mi. E. Cobar, N.S.W., 6 ix 1967, *E. intertexta*"; 7♀s "Willandra Crk., N.S.W., 26 i 1967, *E. ?largiflorens*".
Notes: Lerps ? round to oval. Dark markings on the scutum of adult females are similar to those of the dark phase of an adult female *G. retrusa* (Text-fig. 132) but reduced in area and intensity.

Glycaspis (*Glycaspis*) *rylstonensis*, sp. nov.

General Colour: Unrecorded.
Claspers & Aedeagus: As in Text-fig. 59.
Length of Aedeagus: (1 specimen) 0.218 mm.
Hindwings: Cu_1 as Group (i).
Host Plant: *E. blakelyi* Maiden (Blakely's red gum).
Type Locality: 2 mi. E. Rylstone, New South Wales (Olinda Rd.).
Types: Holotype male on slide labelled "2 mi. E. Rylstone, N.S.W., 6 iv 1966, *E. blakelyi*".

Glycaspis (*Glycaspis*) *grapta*, sp. nov.

(Gr. *graptos* = painted)

General Colour: Cream to orange-yellow; red suffusion; sesaonal variation in coloration.
Claspers & Aedeagus: As in Text-fig. 60.
Length of Aedeagus: (29 specimens) 0.221 mm. to 0.256 mm.
Hindwings: Cu_1 as Group (i).
Host Plants: *E. oleosa; E. ?salmonophloia.*
Type Locality: 33 mi. N. Hillston, New South Wales.
Types: Holotype male on slide labelled "33 mi. N. Hillston, N S.W., 26 i 1967, *E. socialis* (= *oleosa*)". Paratypes: (slides) 4♂s with same label data as the holotype; 1♂ "33 mi. S. Cobar, N.S.W., 27 i 1967, *E. ?socialis*"; 1♂ "Alawoona, S.A., 12 xi 1966, *E. ?oleosa*"; 3♂s "4 mi. S. Coolgardie, W.A., 7 x 1966, *E. ?salmonophloia*"; 1♂ "3 mi. S. Kalgoorlie, W.A., 5 x 1966, *E. oleosa*"; 2♂s "2 mi. S. Kalgoorlie, W.A., 5 x 1966, *E. ?oleosa*"; 3♂s "2.5 mi. S. Menzies, W.A., 1 x 1966, *E. ?salmonophloia*"; 2♂s "99 mi. E. Geraldton, W.A., 15 viii 1966, *E. oleosa*"; 4♂s "112 mi. E. Wittenoom, W.A., 9 viii 1966, *E. oleosa glauca*". (in alcohol) 5♀s with same label data as the holotype; 2♀s "6 mi. W. Mannum, SA., 11 xi 1966, *E. ?oleosa*"; 2♀s "6 mi. N Mannum, S.A., 11 xi 1966, *E. ?oleosa*"; 1♀ "Alawoona, S.A., 12 xi 1966, *E. ?oleosa*"; 1♀ "62 mi. E. Ivy Tank, S.A., 16 x 1966, *E. ?oleosa*"; 2♂s 22♀s "4 mi. S. Coolgardie, W.A., 7 x 1966, *E. ?salmonophloia*"; 1♀ "2 mi. S. Kalgoorlie, W.A., 5 x 1966, *E. ?oleosa*"; 11♀s "2 mi. S. Kalgoorlie, W.A., 5 x 1966, *E. ?calycogona, E. ?oleosa*"; 4♂s 15♀s "2.5 mi. S. Menzies, W.A., 1 x 1966, *E. ?salmonophloia*"; 7♂s 7♀s "99 mi. E. Geraldton, W.A., 15 viii 1966, *E. oleosa*"; 19♂s 26♀s "112 mi. E. Wittenoom, W.A., 9 viii 1966, *E. oleosa glauca*".
Notes: Lerps round to oval.

Glycaspis (*Glycaspis*) *wanbiensis*, comb. nov.

Glycaspis (*Alloglycaspis*) *wanbiensis* Moore 1964, p. 148, Text-figs. 1-3.

Claspers & Aedeagus: As in Text-fig. 61.
Length of Aedeagus: (22 specimens) 0.180 mm. to 0.209 mm.
Hindwings: Cu_1 as Group (i).

Host Plants: *E. oleosa; E. ?foecunda; E. ?leucoxylon.*
Type Locality: Loxton, South Australia.
Specimens Examined: (slides) 1♂ "Tintinara, S.A., 14 xi 1966, *E. ?leucoxylon*"; 6♂s "Alawoona, S.A., 12 xi 1966, *E. ?oleosa*"; 3♂s "Lowaldie, S.A., 13 xi 1966, *E. ?foecunda*". (in alcohol) 2♀s "Tintinara, S.A., 14 xi 1966, *E. ?leucoxylon*"; 14♂s 24♀s "Alawoona, S.A., 12 xi 1966, *E. ?oleosa*"; 11♂s 13♀s "Lowaldie, S.A., 13 xi 1966, *E. ?foecunda*".
Notes: Lerps round; on leaves, stems, leaf-petioles and bud peduncles.

Glycaspis (*Glycaspis*) *notialis*, sp. nov.

(L. *notialis* = southern)

General Colour: Similar to *G. wanbiensis* and *G. repentina*, but dark markings black rather than brown; abdomen and other areas red.
Claspers & Aedeagus: As in Text-fig. 62.
Length of Aedeagus: (3 specimens) 0.191 mm. to 0.196 mm.
Hindwings: Cu_1 as Group (i).
Host Plants: *E. gracilis; E. pileata-dumosa* complex; *?E porosa; E. ?oleosa.*
Type Locality: 28 mi. S. Ceduna, South Australia.
Types: Holotype male on slide labelled "28 mi. S. Ceduna, S A., 17 x 1966, *E. pileata-dumosa* complex". Paratypes: (slides) 1♂ "20 mi. N. Norseman, W.A., 10 x 1966, *E. gracilis*"; 1♂ "2 mi. N. Bow Hill, S.A., 11 xi 1966, *E. ?oleosa*". (in alcohol) 1♀ "28 mi. S. Ceduna, S.A., 17 x 1966, *E. pileata-dumosa* complex"; 1♀ "2 mi. N. Bow Hill, S.A., 11 xi 1966, *E. ?oleosa*"; 1♀ "6 mi. W. Mannum, S.A., 11 xi 1966, *E. ?oleosa*".
Other Specimens Examined: 2♀s "3 mi. S. Pt. Wakefield, S.A., 25 xi 1966, *E. porosa*".
Notes: Lerps round.

Glycaspis (*Glycaspis*) *occidentalis* (Solomon), comb. nov.

Spondyliaspis occidentalis Solomon 1936, pp. 41-48, 2 Pls. of 12 figs.
Glycaspis occidentalis: Taylor 1960, p. 385.
Glycaspis (*Alloglycaspis*) *occidentalis*: Moore 1964, p. 150, Text-fig. 5.

General Colour: Brown to dark brown.
Claspers & Aedeagus: As in Text-fig. 63 (of Lectotype).
Length of Aedeagus: (12 specimens) 0.203 mm. to 0.221 mm.
Hindwings: Cu_1 as Group (i).
Host Plants: *E. gomphocephala* A.DC. (tuart); *E. redunca elata; E. oleosa; ?E. calycogona.*
Type Locality: Perth, Western Australia.
Specimens Examined: (slides) 3♂s "Wembley Golf Course, W.A., 4 v 1954, K. L. Taylor, Twigs of *E. gomphocephala*"; 4♂s "Wooroloo, W.A., 2 ix 1966, *E. redunca elata*"; 4♂s "Kalgoorlie, W.A., on gum trees", to WA; 4♂s 5♀s "Perth. W.A., 4 iii 1959, V.F.E., 7361, B.M. 1960-144", to BM; 3♂s "Bullsbrook, W.A., 18 iii 1969, S. J. Curry, *E redunca elata*", to WA; 3♂s "Psyllid from eucalypt, young secrete sugary covering, Perth, 16 ii 1931, B.A.O'C", to WA. (in alcohol) ca. 50♂s & ♀s, "Kalgoorlie, W.A., on gum trees", to WA; 1♀ "Crawley, Perth, W.A., 6 ix 1966, *E. gomphocephala*"; 3♂s 4♀s "Wooroloo, W.A., 2 ix 1966, *E. redunca elata*"; 1♀ "99 mi. E. Geraldton, W.A , 15 viii 1966, *E. oleosa*"; 1♀ "44 mi. S. Menzies, W.A., 2 x 1966, *E. ?calycogona*"; 2♀s nymphs, lerps, "Bullsbrook, W.A., 18 iii 1969, S. J. Curry, *E. redunca elata*"; nymphs, lerps, "Rockingham, W.A., 23 i 1969, S. J. Curry, *E. gomphocephala*", to WA. (dried) 4♂s 3♀s "Wembley Golf Course, W.A., 4 v 1954, K. L. Taylor, Twigs of *E. gomphocephala*".

Notes on the *occidentalis* group of species

The type slides, and 24 additional slides of male aedeagi and claspers have been examined and compared, with the following indications:-

G. repentina is a separate species.

The shape of the aedeagus of the *G. occidentalis* Lectotype is apparently atypical of the species, and specimens approach *G. wanbiensis* in the general shape of that character.

The length-ranges of the male aedeagi overlap in the specimens from the two widely separated areas, with the average length for the Western Australian specimens exceeding that for the South Australian specimens.

From the known distribution of these two groups, and the intervening natural barriers to the intermingling of the species, it seems unlikely that there is any overlap of populations.

The claspers of the W.A. group specimens are consistently wider than those of the S.A. group, although the width for one W.A. specimen corresponds with the maximum width for the S.A. specimens.

In this paper, the two species *G. occidentalis* and *G. wanbiensis* are retained, as it is considered that more extensive investigations to determine their taxonomic status, are required.

Glycaspis (*Glycaspis*) *yilgarniensis*, sp. nov.

(Yilgarnia is the name given to an area, which includes the type locality, believed to be the oldest land surface in Australia).

General Colour: Cream suffused red, with extensive dark markings.
Claspers & Aedeagus: As in Text-fig. 64.
Length of Aedeagus: (1 specimen) 0.207 mm.
Hindwings: Cu_1 as Group (i).
Host Plants: *E. gamophylla* F. Muell. (twin-leaved gum); *E. ?lesouefii.*
Type Locality: 66 mi. S. Mundiwindi, Western Australia.
Types: Holotype male on slide labelled "66 mi. S. Mundiwindi, W.A., 11 viii 1966, *E. gamophylla*". Paratype: (slide) 1♂ "44 mi. S. Menzies, W.A., 2 x 1966, *E. ?lesouefii*".

Glycaspis (*Glycaspis*) *infucata*, sp. nov.

(L. *infucatus* = painted)

General Colour: Cream suffused brown, black and red; there is a dark coloured band on the forewings of the females, contiguous to stem of M+Cu and branch of Cu_2, and a paler brownish suffusion on posterior half of forewings.
Claspers & Aedeagus: As in Text-fig. 65.
Length of Aedeagus: (1 specimen) 0.254 mm.
Hindwings: Cu_1 as Group (i).
Host Plant: *E. leptopoda* Benth. (tammin mallee).
Type Locality: 90 mi. E. Geraldton, Western Australia.
Types: Holotype male on slide labelled "90 mi. E. Geraldton, W.A., 15 viii 1966, *E. leptopoda*". (in alcohol) 3♀s and anterior half of 1 specimen, with same label data.

Glycaspis (*Glycaspis*) *felicitaris*, sp. nov.

(L. *felicitas* = good fortune; *-aris* = pertaining to)

General Colour: Brown, black and white or cream; ♂ forewing with grey suffused band as in Text-fig. 135.
Claspers & Aedeagus: As in Text-fig. 66.
Length of Aedeagus: (1 specimen) 0.304 mm.
Hindwings: Cu_1 as Group (i), and the shortest of any spp. in the Group.
Host Plant: *E. tetraptera* Turcz. (square fruited mallee).
Type Locality: 13 mi. N. Esperance, Western Australia.
Types: Holotype male and nymph on slide labelled "13 mi. N. Esperance, W.A., 29 ix 1966, *E. tetraptera*".
Notes: Lerps round; small lerps very granular, with few short filaments.

Glycaspis (*Glycaspis*) *subita*, sp. nov.

(L. *subitus* = unexpected)

General Colour: Unrecorded.
Claspers & Aedeagus: As in Text-fig. 67.

Length of Aedeagus: (1 specimen) 0.322 mm.
Hindwings: Cu$_1$ as Group (ii).
Host Plant: *E. cornuta* Labill. (yate).
Type Locality: Stirling Range, Western Australia.
Types: Holotype male on slide labelled "Stirling Ra., W.A., 23 ix 1966, *E. cornuta*".
Notes: The aedeagus of this species suggests affinities with *G. pervagata*.

Glycaspis (*Glycaspis*) *rivalis*, comb. nov.

Glycaspis (*Alloglycaspis*) *rivalis* Moore 1961, pp. 155-6, Text-fig. 34.

Claspers & Aedeagus: As in Text-fig. 68.
Length of Aedeagus: (19 specimens) 0.216 mm. to 0.248 mm.
Hindwings: Cu$_1$ as Group (i).
Host Plants: *E. paniculata* Sm. (grey ironbark); *E. ?ovata*.
Type Locality: Ourimbah State Forest, New South Wales.
Specimens Examined: (slides) 4♂s "5 mi. W. Lakes Entrance, Vic., 6 i 1967, *E. ?ovata*". (in alcohol) 25♂s 35♀s with same label data. (Dried) 1♂ "Ourimbah S.F., N.S.W., 14 xii 1956, K. L. Taylor, *E. acmenioides*".
Notes: Lerps round.

Glycaspis (*Glycaspis*) *pilata*, comb. nov.

Glycaspis (*Alloglycaspis*) *pilata* Moore 1961, pp. 156-7, Text-fig. 35.

Claspers & Aedeagus: As in Text-fig. 69.
Length of Aedeagus: (6 specimens) 0.236 mm. to 0.263 mm.
Hindwings: Cu$_1$ as Group (i).
Host Plant: *E. paniculata*.
Type Locality: Kurrajong, New South Wales.
Notes: Lerps round.

Glycaspis (*Glycaspis*) *whitei*, sp. nov.

(Named for Dr. T. C. R. White, of the University of Adelaide, S.A., whose helpful information concerning this and other *Glycaspis* spp., together with the provision of many reared specimens, contributed much to this Revision).

General Colour: Lemon yellow lightly marked with black; very variable.
Claspers & Aedeagus: As in Text-fig. 70.
Length of Aedeagus: (16 specimens) 0.236 mm. to 0.267 mm.
Hindwings: Cu$_1$ as Group (ii).
Host Plants: *E. polyanthemos* Schau. (red box); *E. fasciculosa* F. Muell. (pink gum).
Type Locality: 1 mi. W. Rylstone, New South Wales.
Types: Holotype male on slide labelled "1 mi. W. Rylstone, N.S.W., 1 ii 1967, *E. polyanthemos*". Paratypes: (slides) 1♂ with same label data as the holotype; 4♂s "8.5 mi. E. Tumut, N.S.W., 12 i 1967, *E. polyanthemos*"; 2♂s "Tintinara, S.A., 25 v 1967, T. C. R. White, *E. fasciculosa*", (1♂ to SM); 2♂s "Brecon, S.A., 25 v 1967 (eggs), T. C. R. White, Reared in lab. 15.5°-21°C., 24 L.O.D., *E. fasciculosa*", (1♂ to SM); 2♂s "Keith, S.A., 25 v 1963, T. C. R. White, Hatched 1 vi 63, emgd. 22-23 vi 63, *E. fasciculosa*", (1♂ to SM). (in alcohol) 4♂s 23♀s "8.5 mi. E. Tumut, N.S.W., 12 i 1967, *E. polyanthemos*"; 8♂s 12♀s "1 mi. W. Rylstone, N.S.W., 1 ii 1967, *E. polyanthemos*"; 3 nymphs 1 lerp "Keith, S.A., 29 v 1963, T. C. R. White, *E. fasciculosa*, (eggs), pres. 1 vii 63"; 11♀s "Tintinara, S.A., 25 v 1967, T. C. R. White, *E. fasciculosa*"; 1♀ 1 lerp, "National Park, S.A., 17 vi 1963, T. C. R. White, emgd. 28 vi 63, *E. fasciculosa*"; 1♀, 1 lerp, with same label data, but "emgd. 27 vi 63"; 6 nymphs, 9 lerps, "Keith, S.A., 25 v 1963, T. C. R. White, *E. fasciculosa*"; 3 nymphs, 6 lerps "Keith, S.A., 25 v 1963, T. C. R. White, Hatched 1 vi 63, em. 22-23 vi 63, eggs short, yellow, *E. fasciculosa*"; 4♂s 9♀s, nymphs, lerps, "Brecon, S.A., 25 v 1967, coll. & reared T. C. R. White, 15.5°-21°C., 24 L.O.D., *E. fasciculosa*"; 1♀ "23 mi. S. Keith, S.A., 15 xi 1966, *E. fasciculosa*"; 2♀s "7 mi. E. Tumut, N.S.W., 25 ii 1969, *E. polyanthemos*".

Other Specimens Examined: (slide) 1♂ "Heywood Park, S.A., 7 x 1940, R. V. Southcott, ACA, 714 DA". (in alcohol) 2♀s "Tintinara, S.A., 14 xi 1966, *E. ?fasciculosa*".

Notes: Lerps round. This species appears near to *G. fuscovena* but is readily separable on the shape of the male aedeagus.

Glycaspis (*Glycaspis*) *fuscovena,* sp. nov.

(L. *fuscus* = brown, dark; *vena* = a vein)

General Colour: Cream to yellow, with dark marks and red suffusion.

Claspers & Aedeagus: As in Text-fig. 71.

Length of Aedeagus: (7 specimens) 0.241 mm. to 0.284 mm.

Hindwings: Cu_1 as Group (ii).

Host Plants: *E. woollsiana* R. T. Bak. (mallee box) or *E. microcarpa* Maiden (green-leaved box); *E. ?fasciculosa; E. odorata* Behn. & Schlect. (peppermint box).

Type Locality: Gillenbah State Forest, Narrandera, New South Wales.

Types: Holotype male on slide labelled "Gillenbah S.F., N.S.W., 1 xi 1967, *E. woollsiana* or *E. microcarpa*". Paratypes: (slides) 2♂s with same label data as the holotype; 2♂s "Australia, Koebele, *E. leucoxylon*", to UM; 2♂s "4 mi. ESE Struan, S.A., 16 xi 1966, *E. ?fasciculosa*"; 6♂s "Blackwood, S.A., 7 i 1950, T. O. Browning, *Euc.* sp.", to SI; 2♂s "Waite Institute, S.A., 1 x 1963, T. C. R. White, *E. odorata*". (in alcohol) 2♂s 2♀s with same label data as the holotype; 1♂ 5♀s "4 mi. ESE. Struan, S.A., 16 xi 1966, *E. ?fasciculosa*"; 5♂s 1♀ "Blackwood, S.A., 7 i 1950, T. O. Browning, *Euc.* sp.", to SI; 4♀s nymphs, lerps, "Waite Institute, S.A., 1 x 1963, T. C. R. White, *E. odorata*". (dried) 4♂s 7♀s "Australia, Koebele", to UM.

Other Specimens Examined: (slides) 2♂s "Belair, S.A., 10 x 1952, G. F. Gross", to SM; 1♂ "Lyndoch, S.A., 29 iii 1891, Tepper, from thickets *E. odorata*", to SM; 4♂s "Lyndoch scrub, S.A., 30 iii 1891, Tepper, on leaves *E. odorata,* to Maskell 5 iv 91", to SM; 1♂ "Black Mtn., A.C.T., 1 xi 1954, I. F. B. Common, light trap". (in alcohol) 1♀ "3 mi. S. Wilmington, S.A., 24 x 1966, *E. ?odorata*". (dried) 2♀s "Belair, S.A., 10 x 1952, G. F. Gross", to SM; 6?♂s, nymphs, lerps, parasites, "Lyndoch scrub, S.A., 30 iii 1891, on leaves *E. odorata,* to Maskell 5 iv 91", to SM; 1♀ "Mt. Lofty, S.A., N. B. Tindale", to SM; 2♀s "Lyndoch, S.A., 29 iii 1891, *Psylla* sp. from shields, on *E. odorata*", to SM.

Glycaspis (*Glycaspis*) *wagaitjae,* sp. nov.

(= of the Aboriginal tribe of Wagaitj, which inhabited the type locality)

General Colour: Pale yellow, with few dark marks on females only, eyes red.

Claspers & Aedeagus: As in Text-fig. 72.

Length of Aedeagus: (4 specimens) 0.158 mm. to 0.169 mm.

Hindwings: Cu_1 as Group (ii).

Host Plant: *E. ?tetrodonta* F. Muell. (Darwin stringybark).

Type Locality: 35 mi. S. Darwin, Northern Territory.

Types: Holotype male on slide labelled "35 mi. S. Darwin, N.T., 4 vii 1966, *E. ?tetrodonta*". Paratypes: (slides) 2♂s with same label data as the holotype; 1♂ "5.5 mi. S. Darwin, N.T., 3 vii 1966, *E. ?tetrodonta*". (in alcohol) 12♂s 13♀s with same label data as the holotype.

Notes: Lerps round; eggs in circles and arcs; large numbers of lerps on leaves and twigs. Vein Cu_1 of the hindwing and the shape of the claspers, suggest that this species is more recent in phylogeny than other species in the *occidentalis* group, to which it apparently belongs because of the short genal processes, the disposition of feeding nymphs, and the general biology of the species.

The species is readily separable from other species of similar coloration by the short genal processes and the unusual characteristic for spp. in this genus, of red eyes.

Glycaspis (*Glycaspis*) *caurina*, sp. nov.

(L. *caurinus* = north-western)

General Colour: Deep lemon-yellow; no dark marks; bases of antennae and anterior projections of vertex sometimes lightly suffused red; genal processes suffused grey on internal edges.
Claspers & Aedeagus: As in Text-fig. 73.
Length of Aedeagus: (3 specimens) 0.187 mm. to 0.203 mm.
Hindwings: Cu$_1$ as Group (ii).
Host Plant: *E. jensenii* Maiden (wandi ironbark).
Type Locality: 88 mi. W. Timber Creek, Northern Territory.
Types: Holotype male on slide labelled "88 mi. W. Timber Creek, N.T., 9 vii 1966, *E. jensenii*". Paratypes: (slides) 2♂s with same label data. (in alcohol) 14♂s 30♀s 1 nymph, with same label data.
Notes: Lerps round.

Glycaspis (*Glycaspis*) *lucrosa*, sp. nov.

(L. *lucrosa* = advantageous)

General Colour: Yellow; variable dark marks on female dorsal abdominal segments.
Claspers & Aedeagus: As in Text-fig. 74.
Length of Aedeagus: (5 specimens) 0.218 mm. to 0.232 mm.
Hindwings: Cu$_1$ as Group (ii).
Host Plant: *E. tetrodonta*.
Type Locality: 28 mi. S. Normanton, Queensland.
Types: Holotype male on slide labelled "28 mi. S. Normanton, Qld., 27 v 1966, *E. tetrodonta*". Paratypes: (slides) 1♂ "2 mi. N. Larrimah, N.T., 14 vi 1966, *E. tetrodonta*"; 1♂ "5 mi. N. Larrimah, N.T., 15 vi 1966, *E. tetrodonta*"; 2♂s "5.5 mi. S. Darwin, N.T., 3 vii 1966, *E. tetrodonta*". (in alcohol) 3♀s "3.5 mi. S. Normanton, Qld., 27 v 1966, *E. tetrodonta*"; 2♀s "27 mi. N. Larrimah, N.T. ,15 vi 1966, *E. tetrodonta*"; 6♀s "5 mi. N. Larrimah, N.T., 15 vi 1966, *E. tetrodonta*"; 1♀ "13 mi. N.W. Katherine, N.T., 22 vi 1966, *E. tetrodonta*"; 1♀ "6 mi. S.W. East Alligator Riv., N.T., 24 vi 1966, *E. tetrodonta*"; 7♀s "5.5 mi. S. Darwin, N.T., 3 vii 1966, *E. ?tetrodonta*"; 1♂ 1♀ "128 mi. W. Timber Crk., W.A., 10 vii 1966, *E. tetrodonta*".
Notes: Lerps round.

Glycaspis (*Glycaspis*) *anota*, sp. nov.

(L. *a-* = without; *nota* = a mark)

General Colour: Yellow; a black spot each side of the anal aperture on female specimens only.
Claspers & Aedeagus: As in Text-fig. 75.
Length of Aedeagus: (11 specimens) 0.203 mm. to 0.227 mm.
Hindwings: Cu$_1$ as Group (ii).
Host Plants: *E. phoenicea* F. Muell. (ngainggar or scarlet gum); *E. miniata* A. Cunn. ex Schau. (Melaleuca gum).
Type Locality: 63 mi. W. Georgetown, Queensland.
Types: Holotype male on slide labelled "63 mi. W. Georgetown, Qld., 24 v 1966, *E. miniata*". Paratypes: (slides) 3♂s with same label data as the holotype; 2♂s "Roper Valley H.S., N.T., 16 vi 1966, *E. phoenicea*"; 2♂s "5.5 mi. S. Darwin, N.T., 3 vii 1966, *E. ?miniata*"; 1♂ "Edith Riv., N.T., 22 vi 1966, *E. miniata*"; 1♂ "King Leopold Ra., W.A., 19 vii 1966, *E. miniata*"; 1♂ "14 mi. S. Derby, W.A., 17 vii 1966, *E. miniata*". (in alcohol) 4♂s 5♀s with same label data as the holotype; 3♂s 4♀s, 1 nymph, "40 mi. W. Georgetown, Qld., 23 v 1966, *E. miniata*"; 3♀s "13 mi. NW. Katherine, N.T., 22 vi 1966, *E. miniata*"; 1♂ 6♀s "Edith Riv., N.T., 22 vi 1966, *E. miniata*"; 4♀s "14 mi. S. Derby, W.A., 17 vii 1966, *E. miniata*"; 2♀s "King Leopold Ra., W.A., 19 vii 1966, *E. miniata*"; 6♂s 27♀s "Roper Valley H.S., N.T., 16 vi 1966, *E. phoenicea*"; 2♀s "5.5 mi. S. Darwin, N.T., 3 vii 1966, *E. ?miniata*".
Notes: Lerps round.

Glycaspis (*Glycaspis*) *wondjinae*, sp. nov.

(The Aboriginal Cult, Wondjina, was practised in the area of the type locality).

General Colour: Cream to yellow, with variable dark markings; females with red suffusion, and sometimes with darker medio-dorsal area.

Claspers & Aedeagus: As in Text-fig. 76.

Length of Aedeagus: (13 specimens) 0.203 mm. to 0.243 mm.

Hindwings: Cu_1 as Group (ii).

Host Plants: *E. houseana* W. V. Fitzgerald ex Maiden (tropical white gum); *E. alba* Reinw. ex Blume (Timor white gum); *E. bigalerita* F. Muell. (Adelaide River white gum).

Type Locality: King Leopold Range, Kimberleys, Western Australia (nr. summit, in creek bed).

Types: Holotype male on slide labelled "King Leopold Ra., W.A., 19 vii 1966, *E. houseana*". Paratypes: (slides) 1♂ with same label data as the holotype; 2♂s "35 mi. S. Townsville, Qld., 4 v 1966, *E. alba*"; 3♂s "11 mi. S. Cooktown, Qld., 15 v 1966, *E. ?alba*"; 2♂s "17 mi. S. Larrimah, N.T., 14 vi 1966, *E. bigalerita*"; 2♂s "27 mi. N. Katherine, N.T., 22 vi 1966, *E. ?bigalerita*"; 1♂ "42 mi. SW. Katherine, N.T., 6 vii 1966, *E. ?bigalerita*"; 2♂s "24 mi. W. Kununurra, W.A., 10 vii 1966, *E. ?bigalerita*". (in alcohol) 5♀s with same label data as the holotype; 5♀s "35 mi. S. Townsville, Qld., 4 v 1966, *E. alba*"; 7♀s "11 mi. S. Cooktown, Qld., 15 v 1966, *E. ?alba*"; 1♂ 6♀s "17 mi. S. Larrimah, N.T., 14 vi 1966, *E. bigalerita*"; 1♂ 4♀s "27 mi. NW. Katherine, N.T., 22 vi 1966, *E. ?bigalerita*"; 2♀s "63 mi. S. Darwin, N.T., 5 vii 1966, *E. ?alba*"; 1♂ 2♀s "24 mi. W. Kununurra, W.A., 10 vii 1966, *E. ?bigalerita*".

Notes: Lerps round. Three female dried specimens from Papua, one of which bears label data indicating that its host plant is *E. alba*, have been examined. Until male specimens are studied, the identification of the species must remain in doubt. Label data are "Saraga, Port Moresby, Papua, v 1968, T. L. Fenner, *E. alba*"; same locality, "4 ii 1969, T. L. Fenner, at house light"; "Port Moresby, Boroko, N.G., 6-7 xi 1960, J. L. Gressitt, Malaise Trap, Bishop Museum", to BP.

Glycaspis (*Glycaspis*) *quornensis*, sp. nov.

General Colour: Yellow suffused red, with variable dark markings.

Claspers & Aedeagus: As in Text-fig. 77.

Length of Aedeagus: (2 specimens) 0.250 mm, 0.261 mm.

Hindwings: Cu_1 as Group (ii).

Host Plants: *E. albens* Benth. (white box); *E. microcarpa*; *?E. leucoxylon*.

Type Locality: 6 mi. S. Quorn, South Australia.

Types: Holotype male on slide labelled "6 mi. S. Quorn, S.A., 23 x 1966, *?E. albens*". Paratypes: (slide) 1♂ 1♀ "26 mi. S. Omeo, Vic., 7 i 1967, *E. albens*". (in alcohol) 3♀s with same label data as the holotype; 7♀s "18 mi. S. Wilmington, S.A., 24 x 1966, *E. albens*"; 6♀s "6 mi. S. Quorn, S.A., 23 x 1966, *?E. leucoxylon*".

Other Specimens Examined: (in alcohol) 2♀s "Lah Arum, Vic., 17 xi 1966, *E. microcarpa*"; 7♀s "6 mi. N. Merriwa, N.S.W., 25 ix 1967, *E. albens*".

Glycaspis (*Glycaspis*) *anomala*, sp. nov.

(Gr. *anomalos* = irregular)

General Colour: Seasonal variation; lemon yellow to orange, sometimes suffused red; sometimes with dark marks.

Claspers & Aedeagus: As in Text-fig. 78.

Length of Aedeagus: (12 specimens) 0.203 mm. to 0.256 mm.

Hindwings: Cu_1 as Group (ii).

Host Plants: *E. microtheca*; *E. largiflorens*; *E. ?populnea*; *E. cambageana*; *E. thozetiana* F. Muell. ex R. T. Bak. (yapunyah); *E. microcarpa* or *E. woollsiana*.

Type Locality: Warrego Riv., New South Wales.

Types: Holotype male on slide labelled "Warrego Riv., N.S.W., 29 viii 1967, *E. ?microtheca*". Paratypes: (slides) 2♂ "Paroo Riv., N.S.W., 29 viii 1967, *E. ?microtheca*”; 1♂ “23 mi. W. Camooweal, N.T., 9 vi 1966, *E. ?microtheca*”; 2♂s “10 mi. E. Brewarrina, N.S.W., 28 viii 1967, *E. largiflorens*”; 5♂s “2 mi. NE. Hillston, N.S.W., 25 i 1967, *E. ?largiflorens*”; 1♂ “Gunbar, N.S.W., 24 i 1967, *E. ?largiflorens*”. (in alcohol) 2♂s 8♀s “Warrego Riv., N.S.W., 29 viii 1967, *E. ?microtheca*”; 2♀s “Paroo Riv., N.S.W., 29 viii 1967, *E. ?largiflorens*”; 3♀s “45 mi. W. Moree, N.S.W., 26 viii 1967, *E. microtheca*”; 2♀s “3 mi. W. Moree, N.S.W., 26 viii 1967, *E.? microtheca*”; 8♀s “3.5 mi. N. Walgett, N.S.W., 28 viii 1967, *E. ?microtheca*”; 1♂ 1♀ “10 mi. E. Brewarrina, N.S.W., 28 viii 1967, *E. largiflorens*”; 5♀s “44 mi. W. Wanaaring, N.S.W., 29 viii 1967, *E. ?populnea*”; 1♀ “5 mi. N. Tibooburra, N.S.W., 31 viii 1967, *E. ?microtheca*”; 1♀ “48 mi. S. Kayrunnera, N.S.W., 3 ix 1967, *E. ?largiflorens*”; 4♀s “2 mi. W. Hermidale, N.S.W., 6 ix 1967, *E. ?populnea*”; 4♀s “14 mi. E. Cobar, N.S.W., 27 i 1967, *Euc.* sp.”; 11♀s “4 mi. NE. Hillston, N.S.W., 25 i 1967, *E. ?populnea*”; 9♂s 11♀s “2 mi. NE. Hillston, N.S.W., 25 i 1967, *E. ?largiflorens*”; 1♂ 3♀s “3 mi. S. Hillston, N.S.W., 25 i 1967, *Euc.* sp.”; 3♀s “7 mi. S. Jerilderie, N.S.W., 23 i 1967, *E. ?largiflorens*”; 2♂s 8♀s “Deniliquin, N.S.W., 24 i 1967, *E. ?largiflorens*”; 3♂s 9♀s “Gunbar, N.S.W., 24 i 1967, *E. ?largiflorens*”; 1♂ 1♀ “23 mi. W. Camooweal, N.T., 9 vi 1966, *E. ?microtheca*”; 2♀s “17 mi. N. Banana, Qld., 25 vi 1966, *E. ?cambageana*”; 2♀s “21 mi. N. Clermont, Qld., 1 v 1966, *E. cambageana*”; 1♀ “29 mi. N. Clermont, Qld., 1 v 1966, *E. thozetiana*”; 1♀ “Narrandera,, N.S.W., 1 xi 1967, *E. microcarpa* or *E. woollsiana*”.

Other Specimens Examined: (in alcohol) 1♀ “60 mi. S. Cooktown, Qld., 15 v 1966, *Euc.* sp.”; 2♀s “6 mi. N. Emerald, Qld., 30 iv 1966, *E. microtheca*”.

Glycaspis (*Glycaspis*) *johnsoni*, sp. nov.

(Named for Mr. L. A. S. Johnson, of the Royal Botanic Gardens, Sydney, whose helpful identifications of a large number of host plants over many years have been of inestimable value).

General Colour: Yellow, with or without dark marks; paler in coloration than *G. brimblecombei* when occurring together on the same host.

Claspers & Aedeagus: As in Text-fig. 79.

Length of Aedeagus: (17 specimens) 0.182 mm. to 0.214 mm.

Hindwings: Cu_1 as Group (ii).

Host Plants: *E. dealbata* A. Cunn. ex Schau. (tumble-down gum); *E. blakelyi*; *E. dwyeri* Maiden & Blakely (Dwyer's mallee gum); *E. ?largiflorens*.

Type Locality: 10 mi. S. Narrabri, New South Wales.

Types: Holotype male on slide labelled “10 mi. S. Narrabri, N.S.W., 25 viii 1967, *E. dealbata*”. Paratypes (slides) 3♂s with same label data as the holotype; 1♂ “Kandos, N.S.W., 30 viii 1964”; 4♂s “36 mi. E. Rylstone, N.S.W., 7 iv 1966, *E. blakelyi*”; 2♂s “6 mi. NW. Goolma, N.S.W., 31 i 1967, *E. blakelyi*”; 8♂s 2♀s “Corringle S.F., N.S.W., 3 v 1964, *E. dwyeri*”; 7♂s “Capitol Hill, A.C.T., 13 i 1953, E. Lewis, *E. blakelyi*”; 1♂ “Black Mtn., A.C.T., 29 i 1953, E. Lewis, *E. blakelyi*”; 2♂s “Deakin, A.C.T., 24 vii 1953, F. Wheelhouse, *E. blakelyi*”. (in alcohol) 1♂ 10♀s with same label data as the holotype; 20♂s 20♀s “Corringle S.F., N.S.W. ,3 v 1964, *E. dwyeri*”. (dried) 12♂s 17♀s “Capitol Hill, A.C.T., 13 i 1953, E. Lewis, *E. blakelyi*”.

Other Specimens Examined: (slide) 1♂ (with *G. ?gradata*) “2 mi. NE. Hillston, N.S.W., 25 i 1967, *E. ?largiflorens*”. (in alcohol) in 3 tubes with *G. brimblecombei*, labelled “2 mi. E. Rylstone, N.S.W., 6 iv 1966, *E. blakelyi*”; “36 mi. E. Rylstone, N.S.W., 7 iv 1966, *E. blakelyi*”; and “6 mi. N. Goolma, N.S.W., 31 i 1967, *E. blakelyi*”. (dried) 1♀ “Deakin, A.C.T., 24 vii 1953, F. Wheelhouse, *E. blakelyi*”; 2♀s “Black Mtn., A.C.T., 29 i 1953, E. Lewis, *E. blakelyi*”.

Notes: Specimens from Corringle S.F. constructed their lerps on twigs and petioles, indicating biological affinities of this species with the *occidentalis* group of species, but apparently of more recent phylogeny.

Glycaspis (*Glycaspis*) *violae*, sp. nov.

(Named for my project companion who contributed substantially to the successful conclusion of this project).

General Colour: Pale yellow, lightly marked with black.
Claspers & Aedeagus: As in Text-fig. 80.
Length of Aedeagus: (3 specimens) 0.180 mm. to 0.191 mm.
Hindwings: Cu$_1$ as Group (ii).
Host Plant: *E. ?melanophloia.*
Type Locality: 131 mi. N. Clermont, Queensland.
Types: Holotype male on slide labelled "131 mi. N. Clermont, Qld., 2 v 1966, *E. ?melanophloia*". Paratypes: (slides) 2♂ with same label data as the holotype. (In alcohol) 1♂ 3♀s with same label data.
Notes: Lerps ? oval.

Glycaspis (*Glycaspis*) *onychis*, sp. nov.

(L. *onychis* = of onyx)

General Colour: Deep lemon-yellow, sometimes with red suffusion, rarely with dark markings except on seg. 10 of antennae.
Claspers & Aedeagus: As in Text-fig. 81.
Length of Aedeagus: (16 specimens) 0.216 mm. to 0.243 mm.
Hindwings: Cu$_1$ as Group (ii).
Host Plants: *E. brevifolia* F. Muell. (mountain white gum); *E. gamophylla.*
Type Locality: 5 mi. E. Mt. Isa, Queensland.
Types: Holotype male on slide labelled "5 mi. E. Mt. Isa, Qld., 31 v 1966, *E. brevifolia*". Paratypes: (slides) 2♂s with same label data as the holotype; 4♂s "65 mi. N.X-roads, N.T., 12 vi 1966, *E. brevifolia*"; 4♂s "Hall's Crk., W.A., 14 vii 1966, *E. brevifolia*"; 4♂s "Mt Herbert, W.A., 2 viii 1966, *E. brevifolia*"; 1♂ "Joffre Falls, W.A., 5 viii 1966, *E. brevifolia*"; 1♂ "5 mi. E. Joffre Falls, W.A., 6 viii 1966, *E. gamophylla*". (In alcohol) 26♂s 11♀s "70 mi. S. Normanton, Qld., 29 v 1966, *E. brevifolia*"; 29♂s 9♀s "5 mi. E. Mt. Isa, Qld., 31 v 1966, *E. brevifolia*"; 10♂s 2♀s "25 mi. NW. Mt. Isa, Qld., 8 vi 1966, *E. brevifolia*"; 8♀s "65 mi. N.X-roads, N.T., 12 vi 1966, *E. brevifolia*"; 2♂s 3♀s "63 mi. E. on Roper Riv. Rd., N.T., 16 vi 1966, *E. brevifolia*"; 7♂s 24♀s "13 mi. NW. Top Springs, N.T., 7 vii 1966, *E. brevifolia*"; 9♀s "Mt. Herbert, W.A., 2 viii 1966, *E. brevifolia*"; 2♂s 2♀s "Joffre Falls, W.A., 5 viii 1966, *E. brevifolia*"; 3♂s 7♀s "5 mi. S. Dunham Riv. H.S., W.A., 13 vii 1966, *E. brevifolia*"; 9♂s 9♀s "Hall's Crk., W.A., 14 vii 1966, *E. brevifolia*".
Notes: Lerps round. At Mt. Herbert, some lerps tended to ovality.

Glycaspis (*Glycaspis*) *lactea*, comb. nov.

Glycaspis (*Alloglycaspis*) *lactea* Moore 1961, pp. 151-3, Text-fig. 29.

Claspers & Aedeagus: As in Text-fig. 82.
Length of Aedeagus: (1 specimen) 0.193 mm.
Hindwings: Cu$_1$ as Group (ii).
Host Plant: *E. blakelyi* or *E. dealbata.*
Type Locality: Strahorn S.F., New South Wales.
Notes: Lerps round.

Glycaspis (*Glycaspis*) *hackeri*, comb. nov.

Glycaspis (*Alloglycaspis*) *hackeri* Moore 1964a, p. 165, Text-fig. 7.

Claspers & Aedeagus: As in Text-fig. 83.
Length of Aedeagus: (3 specimens) 0.198 mm. to 0.203 mm.
Hindwings: Cu$_1$ as Group (ii).
Host Plant: Not known.
Type Locality: Brisbane, Queensland.
Notes: Lerps not known.

Glycaspis (*Glycaspis*) *rubritincta,* sp. nov.

(L. *ruber* = red; *tinctus* = dyed or tinged)

General Colour: Yellow with some red suffusion.
Claspers & Aedeagus: As in Text-fig. 84.
Length of Aedeagus: (3 specimens) 0.207 mm. to 0.218 mm.
Hindwings: Cu_1 as Group (ii).
Host Plant: *E. confluens* W. V. Fitzg. ex Maiden (Kimberley gum).
Type Locality: King Leopold Ranges, Kimberleys, Western Australia.
Types: Holotype male on slide labelled "King Leopold Ra., W.A., 19 vii 1966, *E. confluens*". Paratypes: (slides) 2♂s with same label data as the holotype. (in alcohol) 5♂s 13♀s with same label data.
Notes: Lerps round.

Glycaspis (*Glycaspis*) *exsertae,* sp. nov.

(L. = of *Eucalyptus exserta*)

General Colour: Yellow, lightly marked with black.
Claspers & Aedeagus: As in Text-fig. 85.
Length of Aedeagus: (1 specimen) 0.198 mm.
Hindwings: Cu_1 as Group (ii).
Host Plant: *E. exserta* F. Muell. (bendo).
Type Locality: 34 mi. N. Clermont, Queensland.
Types: Holotype male on slide labelled "34 mi. N. Clermont, Qld., 1 v 1966, *E. exserta*".

Glycaspis (*Glycaspis*) *froggatti,* sp. nov.

(Named for the late W. W. Froggatt, a pioneer of Australian Entomology)

General Colour: Lemon-yellow; thorax often completely suffused red.
Claspers & Aedeagus: As in Text-fig. 86.
Length of Aedeagus: (48 specimens) 0.200 mm. to 0.243 mm.
Hindwings: As Group (ii).
Host Plants: *E. microneura* Maiden & Blakely (Gilbert River box); *E. oligantha* Schau. (broad-leaved box); *E. argillacea* W. V. Fitzg. *in* Maiden (Kimberley grey box); *E. normantonensis* Maiden & Cambage (box); *E. leptophleba; E. ?intertexta; E. striaticalyx; E. tectifica; E. microtheca.*
Type Locality: 3 mi. S. Normanton, Queensland.
Types: Holotype male on slide labelled "3 mi. S. Normanton, Qld., 27 v 1966, *E. normantonensis*". Paratypes: (slides) 3♂s with same label data as the holotype; 2♂s "119 mi. S. Normanton, Qld., 29 v 1966, *E. microtheca*"; 1♂ "55 mi. W. Croydon, Qld., 25 v 1966, *E. microtheca*"; 1♂ "Flinders Riv. Qld., 28 v 1966, *E. microtheca*"; 3♂s "19 mi. W. Mt. Surprise, Qld., 22 v 1966, *E. microneura*"; 2♂s "107 mi. N. Clermont, Qld., 2 v 1966, *E. microtheca*"; 5♂s "1 mi. S. Batchelor turnoff, N.T., 5 vii 1966, *E. oligantha*"; 2♂s "102 mi. E. X-roads, N.T., 10 vi 1966, *E. microtheca*"; 1♂ "Katherine Gorge, N.T., 21 vi 1966, *E. ?tectifica*"; 2♂s "26 mi. N.W. Katherine, N.T., 22 vi 1966, *E. ?tectifica*"; 1♂ 1♀ "Mary Riv., N.T., 25 vi 1966, *E. ?tectifica*"; 1♂ "88 mi. W. Timber Crk., N.T., 9 vii 1966, *E. tectifica*"; 4♂s "23 mi. SW. Hall's Crk., W.A., 14 vii 1966, *E. argillacea*"; 1♂ 1♀ "Laura Riv., W.A., 14 vii 1966, *E. ?microtheca*"; 3♂s Geikie Gorge, W.A., 16 vii 1966, *E. ?microtheca*"; 1♂ "85 mi. E. Derby, W.A., 19 vii 1966, *E. tectifica*"; 1♂ King Leopold Ra., W.A., 19 vii 1966, *E. ?tectifica*"; 5♂s "67 mi. NE. Pt. Hedland, W.A., 29 vii 1966, *E. microtheca*"; 1♂ "14 mi. SW. Pt. Hedland, W.A., 30 vii 1966, *E. ?microtheca*"; 1♂ "35 mi. S. Roebourne, W.A., 31 vii 1966, *E. ?microtheca*"; 2♂s "2 mi. E. Millstream, W.A., 3 viii 1966, *E. ?intertexta*"; 1♂ 1♀ "92 mi. E. Wittenoom, W.A., 9 viii 1966, *E. ?microtheca*"; 1♂ "68 mi. S. Roy Hill, W.A., 10 viii 1966, *E. ?microtheca*"; 4♂s "2 mi. S. Mundiwindi, W.A., 11 viii 1966, *E. ?intertexta*"; 1♂ "4 mi. S. Nannine, W.A., 13 viii 1966, *E. striaticalyx*". (In alcohol) 2♀s "55 mi. W. Croydon, Qld., 25 v 1966, *E. microtheca*"; 13♂s 21♀s "3 mi. S. Normanton, Qld., 27 v 1966,

E. normantonensis"; 2♀s "119 mi. S. Normanton, Qld., 29 v 1966, *E. microtheca*"; 3♀s "19 mi. W. Mt. Surprise, Qld., 22 v 1966, *Euc.* sp."; 2♀s "Flinders Riv., Qld., 28 v 1966, *E. microtheca*"; 5♀s "107 mi. N. Clermont, Qld., 2 v 1966, *E. microtheca*"; 9♀s "88 mi. W. Timber Crk., N.T., 9 vii 1966, *E. ?tectifica*"; 1♂ 2♀s "26 mi. NW. Katherine, N.T., 22 vi 1966, *E. ?tectifica*"; 3♀s "Katherine Gorge, N.T., 21 vi 1966, *E. tectifica*"; 3♀s "1 mi. S. Batchelor turnoff, N.T., 5 vii 1966, *E. oligantha*"; 1♂ 1♀ "102 mi. E. X-roads, N.T., 10 vi 1966, *E. microtheca*"; 6♀s "2 mi. S. Mundiwindi, W.A., 11 viii 1966, *E. ?intertexta*"; 1♂ 1♀ "2 mi. E. Millstream, W.A., 3 viii 1966, *E. ?intertexta*"; 1♂ 2♀s "85 mi. E. Derby, W.A., (Mt. House Rd.) 19 vii 1966, *E. ?tectifica*"; 2♀s "2 mi. E. Millstream, W.A., 3 viii 1966, *E. ?intertexta*"; 1♂ 1♀ "35 mi. E. Roebourne, W.A., 31 vii 1966, *E. ?microtheca*"; 9♀s "King Leopold Ra., W.A., 19 vii 1966, *Euc.* sp."; 3♂s 4♀s "Geikie Gorge, W.A., 16 vii 1966, *E. ?microtheca*"; 3♂s 2♀s "67 mi. NE. Pt. Hedland, W.A., 29 vii 1966, *E. microtheca*"; 6♀s with same label data; 2♀s "35 mi. S. Roebourne, W.A., 1 viii 1966, *E. ?microtheca*"; 2♂s 25♀s "23 mi. SW. Hall's Crk., W.A., 14 vii 1966, *E. argillacea*"; 1♀ "19 mi. E. Mt. Surprise, Qld., 21 v 1966, *E. leptophleba*".

Other Specimens Examined: 1♀ "55 mi. W. Mt. Isa, Qld., 8 vi 1966, *E. microtheca*"; 2♀s "Roper Bar, N.T., 17 vi 1966, *E. ?microtheca*"; 2♀s "Roper Bar, N.T., 18 vi 1966, *E. ?tectifica*"; 1♀ "8 mi. SW. DeGrey Riv., W.A., 30 vii 1966, *E. ?microtheca*".

Notes: On *E. argillacea, E. microneura,* and *E. microtheca* in some areas, lerps were of a distinctive shape, being "rounded rectangular". Specimens from the north-west of Western Australia tend to have longer claspers with the median area wider.

Glycaspis (*Glycaspis*) *blakei,* sp. nov.

(Named for Dr. S. T. Blake, of the Botanic Museum and Herbarium, Brisbane, Queensland, who gave much assistance in the identifications of numerous host plants from the northern areas of Australia).

General Colour: Yellow; sometimes whole of thorax suffused red; with or without extensive black and/or brown marks; seasonal variation in coloration.

Claspers & Aedeagus: As in Text-fig. 87.

Length of Aedeagus: (20 specimens) 0.221 mm. to 0.265 mm.

Hindwings: Cu_1 as Group (ii).

Host Plant: *Eucalyptus* sp. (gum type, similar in general appearance to *E. camaldulensis* or *E. tereticornis*).

Type Locality: 107 mi. N. Clermont, Queensland.

Types: Holotype male on slide labelled "107 mi. N. Clermont, Qld., 2 v 1966, *Euc.* sp.". Paratypes: (slides) 2♂s with same label data as the holotype; 2♂s 1♀ "Reedy St. George Riv., Qld., 13 v 1966, *Euc.* sp."; 1♂ "3.5 mi. N. Quamby, Qld., 30 v 1966, *Euc.* sp."; 1♂ "25 mi. S. Turkey Crk., W.A., 13 vii 1966, *Euc.* sp."; 1♂ "Geikie Gorge, W.A., 16 vii 1966, *Euc.* sp."; 2♂s "Lennard Riv., W.A., 20 vii 1966, *Euc.* sp."; 1♂ "DeGrey Riv., W.A., 30 vii 1966, *Euc.* sp."; 6♂s "32 mi. S. Roy Hill, W.A., 10 viii 1966, *Euc.* sp."; 4♂s "11 mi. S. Meekatharra, W.A., 13 viii 1966, *Euc.* sp.". (In alcohol) 1♂ 13♀s "107 mi. N. Clermont, Qld., 2 v 1966, *Euc.* sp."; 1♀ "Roper Bar, N.T., 17 vi 1966, *Euc.* sp."; 7♀s "Roper Bar, N.T., 18 vi 1966, *Euc.* sp."; 2♀s "25 mi. S. Turkey Crk., W.A., 13 vii 1966, *Euc.* sp."; 1♂ 5♀s "Geikie Gorge, W.A., 16 vii 1966, *Euc.* sp."; 1♂ 15♀s "Lennard Riv., W.A., 20 vii 1966, *Euc.* sp."; 2♀s "DeGrey Riv., W.A., 30 vii 1966, *Euc.* sp."; 11♂s 18♀s "32 mi. S. Roy Hill, W.A., 10 viii 1966, *Euc.* sp."; 2♂s 4♀s "68 mi. S. Roy Hill, W.A., 10 viii 1966, *Euc.* sp."; 4♀s "3 mi. S. Kumarina, W.A., 12 viii 1966, *Euc.* sp."; 30♂s 40♀s "11 mi. S. Meekatharra, W.A., 13 viii 1966, *Euc.* sp.".

Notes: Lerps ? round.

Glycaspis (*Glycaspis*) *eremica*, sp. nov.

(L. *eremicus* = of the desert, lonely)

General Colour: Yellow suffused red, with dark marks.
Claspers & Aedeagus: As in Text-fig. 88.
Length of Aedeagus: (2 specimens) 0.243 mm., 0.254 mm.
Hindwings: Cu_1 as Group (ii).
Host Plant: *E. ?camaldulensis* Dehn. (Murray red gum).
Type Locality: 45 mi. W. White Cliffs, New South Wales.
Types: Holotype male on slide labelled "45 mi. W. White cliffs, N.S.W., 2 ix 1967, *E. ?camaldulensis*". Paratypes: (slides) 1♂ "8 mi. S. Quorn, S.A., *E. ?camaldulensis*"; 1♂ "Amadeus Basin, N.T., 3 vii 1962, P. Ranford". (In alcohol) 1♂ 3♀s with same label data as the holotype; 2♀s "8 mi. S. Quorn, S.A., 23 x 1966, *E. ?camaldulensis*".
Other Specimens Examined: The following specimens, which may be this species, are not included wih the paratypes, because of uncertain identification, although they were collected in the same general area as the type material:- (in alcohol) 3♀s "Pulgamurtie, 62 mi. SE. Milparinka, N.S.W., 2 ix 1967, *E. ?camaldulensis*"; 1♀ "Bendigo Crk., 5 mi. N. Milparinka, N.S.W., 1 ix 1967, *E. ?camaldulensis*"; 1♀ "Sturt's Depot Glen, 9 mi. W. Milparinka, N.S.W., 1 ix 1967, *E. ?camaldulensis*".

Glycaspis (*Glycaspis*) *taylori*, sp. nov.

(Named for Mr. K. L. Taylor who erected the genus, and gave much advice concerning the Psyllidae).

General Colour: Cream to yellow suffused red, with variable dark marks.
Claspers & Aedeagus: As in Text-fig. 89.
Length of Aedeagus: (9 specimens) 0.236 mm. to 0.254 mm.
Hindwings: Cu_1 as Group (iii).
Host Plants: *E. globulus* Labill. (Tasmanian blue gum); *E. ovata*.
Type Locality: Domain, Hobart, Tasmania.
Types: Holotype male on slide labelled "Domain, Hobart, Tas., 17 xii 1966, *E. globulus*". Paratypes: (slides) 3♂s with same label data as the holotype; 1♂ "1 mi. E. Belchers, Tas., 12 xii 1966, *E. ?ovata*"; 1♂ "1 mi. E. Cygnet, Tas., 18 xii 1966, *E. ovata*"; 1♂ "Apsley Riv., Tas., 28 xii 1966, *E. ?ovata*"; 2♂s "35 mi. W. Scottsdale, Tas., 29 xii 1966, *E. ?ovata*"; 3♂s "8 mi. W. Peterborough, Vic., 20 xi 1966, *E. ovata*" 1♂ "Mt York, N.S.W., 1 ii 1967, *Euc.* sp.". (In alcohol) 4♂s 9♀s with same label data as the holotype; 2♀s "1 mi. E. Belchers, Tas., 12 xii 1966, *E. ?ovata*"; 2♀s "1 mi. E. Cygnet, Tas., 18 xii 1966, *E. ovata*"; 2♀s "Apsley Riv., Tas., 28 xii 1966, *E. ?ovata*"; 8♀s "35 mi. W. Scottsdale, Tas., 29 xii 1966, *E. ?ovata*"; 3♀s "8 mi. W. Peterborough, Vic., 20 xi 1966, *E. ovata*"; 1♀ "15 mi. SE. Tarraleah, Tas., 11 xii 1966, *E. ovata*".
Notes: Lerps round.

Glycaspis (*Glycaspis*) *gradata*, sp. nov.

(L. *gradatus* = step by step; referring to the phylogeny of the species)

General Colour: Lemon-yellow.
Claspers & Aedeagus: As in Text-fig. 90.
Length of Aedeagus: (2 specimens) 0.241 mm., 0.243 mm.
Hindwings: Cu_1 as Group (ii).
Host Plants: *E. ?camaldulensis; E. ?largiflorens.*
Type Locality: Hay, New South Wales.
Types: Holotype male on slide labelled "Hay, N.S.W., 24 i 1967, *E. ?camaldulensis*". Paratypes: (slides) 1♂ "24 mi. N. Hillston, N.S.W., 26 i 1967, *E. ?camaldulensis*". (In alcohol) 1♀ with same label data as the holotype.
Other Specimens Examined: (slides) 1♂ "Gunbar, N.S.W., 24 i 1967, *E. ?largiflorens*"; 1♂ "Willandra Crk., N.S.W., 26 i 1967, *E. ?largiflorens*"; 2♂s "2 mi. NE. Hillston, N.S.W., 25 i 1967, *E. ?largiflorens;* 1♂ "Bendigo, Vic., 10 vi 1892, W. W. Froggatt, S. lerp scale", to NA;

1♂ "Near Tempe Downs, N.T., 24 vi 1963, P. Ranford". (In alcohol) 5♀s "Urana, N.S.W., 23 i 1967, *E. ?camaldulensis.* (Dried) 2♀s "Near Tempe Downs, N.T., 24 vi 1963, P. Ranford".

Glycaspis (*Glycaspis*) *confinis,* sp. nov.

(L. *confinis* = related. Referring to the relationship of this species to the eastern and northern species occurring on "gum" type eucalypts).

General Colour: Yellow, with few dark marks.
Claspers & Aedeagus: As in Text-fig. 91.
Length of Aedeagus: (8 specimens) 0.212 mm. to 0.227 mm.
Hindwings: Cu_1 as Group (ii).
Host Plants: *E. rudis* Endl. (moitch); *E. ?cornuta.*
Type Locality: Middle Swan, Perth, Western Australia.
Types: Holotype male on slide labelled "Middle Swan, Perth, W.A., 2 ix 1966, *E. rudis*". Paratypes: (slides) 4♂s with same label data as the holotype; 1♂ "2 mi. E. Cape Naturaliste, W.A., 18 ix 1966, *E. ?cornuta*"; 1♂ "12 mi. W. Baker's Hill, W.A., 9 ix 1960, M.M.H. Wallace, *E. rudis*"; 2♂s "Perth, W.A., Compere, collector, on *Euc.* sp.", to UM; 3♂s "Beckenham, W.A., 5 iii 1969, K. T. Richards, *E. rudis*", to WA. (In alcohol) 6♂s 14♀s with same label data as the holotype; 3♀s "Irwin Riv., W.A., 23 viii 1966, *E. rudis*"; 12♂s 9♀s, nymphs, "Beckenham, W.A., 5 iii 1969, K. T. Richards, *E. rudis*", to WA.
Other Specimens Examined: (slide) 1♂ 1♀ "Perth, W.A., 15 xi 1950, B. W. Logan, on *E. rudis*", to WA. (Dried) 3♀s "Perth, W.A., Compere, collector, on *Euc.* sp.", to UM; 3♀s "12 mi. W. Baker's Hill, W.A., 9 ix 1960, M.M.H. Wallace, *E. rudis*".
Notes: Lerps round; this species has affinities with *G. blakei* and *G. brimblecombei.*

Glycaspis (*Glycaspis*) *wakelburae,* sp. nov.

(The Aboriginal tribe of Wakelbura once occupied the area of the type locality)

General Colour: Pale to deep yellow, to orange; variable red suffusion; with or without dark marks.
Claspers & Aedeagus: As in Text-fig. 92.
Length of Aedeagus: (17 specimens) 0.198 mm. to 0.225 mm.
Hindwings: Cu_1 as Group (ii).
Host Plants: *E. thozetiana; Eucalyptus* sp. (box); *E. microtheca.*
Type Locality: 118 mi. N. Clermont, Queensland.
Types: Holotype male on slide labelled "118 mi. N. Clermont, Qld., 2 v 1966, *Eucalyptus* sp." (box type). Paratypes: (slides) 7♂s with same label data as the holotype; 8♂s "11 mi. NW. Mt. Carbine, Qld., 16 v 1966, *Euc.* sp."; 1♂ "6 mi. N. Emerald, Qld., 30 iv 1966, *E. microtheca*"; 1♂ "40-48 mi. S. Cooktown, Qld., 15 v 1966, *Euc.* sp."; 3♂s "29 mi. N. Clermont, Qld., 1 v 1966, *E. thozetiana*". (In alcohol) 24♂s 54♀s with same label data as the holotype; 26♀s "11 mi. NW. Mt. Carbine, Qld., 16 v 1966, *Euc.* sp."; 3♀s "40-48 mi. S. Cooktown, Qld., 15 v 1966, *Euc.* sp."; 11♂s 13♀s "29 mi. N. Clermont, Qld., 1 v 1966, *E. thozetiana*"; 1♀ "11 mi. NW. Mt. Carbine, Qld., 16 v 1966, *Euc.* sp.".
Notes: Lerps round, some tending to ovality. Eggs in compact groups near lerps. This is the first record of the occurrence of lerps on blossoms, and they also occurred in large numbers on leaves and stems of young twigs. Some adults were reared. It appears that this species is at an intermediate stage of evolutionary progression from round to oval lerp-forming, as indicated by Cu_1 of the hindwing, and the shape of the lerps and the claspers.

This species may be separated from *G. froggatti* by the shape of the claspers and the sclerotised rounded area of the inner clasper surface protruding into the clasper "foot", as illustrated.

Glycaspis (*Glycaspis*) *brimblecombei*, comb. nov.

Glycaspis (*Alloglycaspis*) *brimblecombei* Moore 1964a, pp. 163-165, Text-fig. 5.

General Colour: A large series of adults of this species collected in the Botanic Park, Adelaide, from *E. camaldulensis*, by Dr. T. C. R. White, provided the first evidence of seasonal variation in coloration in the genus *Glycaspis*.

Claspers & Aedeagus: As in Text-fig. 93.

Length of Aedeagus: (48 specimens) 0.205 mm. to 0.232 mm.

Hindwings: Cu_1 as Group (ii).

Host Plants: *E. camaldulensis; E. blakelyi; E. ?nitens* Maiden (silver top); *E. tereticornis* Sm. (forest red gum); *E. dealbata; E. bridgesiana* R. T. Bak. (but but, or apple); *Eucalyptus* sp. (gum type).

Type Locality: Brisbane, Queensland.

Other Specimens Examined: (slides) 1♂ "Moree, N.S.W., 20 iii 1918, W. W. Froggatt Collection"; 10♂s "Adelaide, S.A., vi-vii 1967, 3 i 1968, T. C. R. White, *E. camaldulensis*"; 4♂s "Adelaide, S.A., 26 ix 1967, T. C. R. White, *E. camaldulensis*"; 2♂s "Pt. Lookout, Armidale, N.S.W., 9 iv 1966, *E. ?nitens*"; 3♂s "107 mi. N. Clermont, Qld., 2 v 1966, *Euc.* sp."; 5♂s "10 mi. S. Narrabri, N.S.W., 25 viii 1967, *E. dealbata*"; 1♂ "2 mi. E. Rylstone, N.S.W., 6 iv 1966, *E. bridgesiana*"; 3♂s "2 mi. E. Rylstone, N.S.W., 6 iv 1966, *E. blakelyi*"; 4♂s "36 mi. E. Rylstone, N.S.W., 7 iv 1966, *E. blakelyi*"; 8♂s "10 mi. E. Callide, Qld., 24 iv 1966, *E. tereticornis*"; 3♂s "Narrandera S.F., N.S.W., 1 xi 1967, *E. camaldulensis*"; 1♂ "20 mi. W. Urana, N.S.W., 23 i 1967, *E. ?camaldulensis*"; 1♂ "Mt. Jerrabomberra, A.C.T., 30 v 1967, E.b.34, E.L., *E. blakelyi*"; 1♂ "24 mi. N. Hillston, N.S.W., 26 i 1967, *E. ?camaldulensis*"; 1♂ "6 mi. NW. Goolma, N.S.W., 31 i 1967, *Angophora floribunda*". (In alcohol) A large series of ♂s and ♀s "Adelaide, S.A., vi-vii, 1967, 10 vi 1967, 26 ix 1967 3 i 1968, T. C. R. White, *E. camaldulensis*"; 1♂ 4♀s "Pt. Lookout, Armidale, N.S.W., 9 iv 1966, *E. ?nitens*"; 21♂s 11♀s "10 mi. S Narrabri, N.S.W., 25 viii 1967, *E. dealbata*"; 2♀s "2 mi. E. Rylstone, N.S.W., 6 iv 1966, *E. bridgesiana*"; "5 mi. E. Cudgegong, N.S.W., 29 ix 1967, *E. bridgesiana*" (with *G. amydra*); 1♂ 5♀s "2 mi. E. Rylstone, N.S W., 6 iv 1966, *E. blakelyi*"; 21♂s 29♀s "36 mi. E. Rylstone, N.S.W., 7 iv 1966, *E. blakelyi*"; 2♂s 6♀s "6 mi. NW. Goolma, N.S.W., 31 i 1967, *E. blakelyi*"; 4♂s 8♀s "Narrandera S.F., N.S.W., 1 xi 1967, *E. camaldulensis*"; 1♂ 2♀s "20 mi. W. Urana, N.S.W., 23 i 1967, *E. ?camaldulensis*"; 9♂s 18♀s "10 mi. NE. Callide, Qld., 24 iv 1966, *E. tereticornis*"; 16♀s "107 mi. N. Clermont, Qld., 2 v 1966, *Euc.* sp."; 2♀s "24 mi. N. Hillston, N.S.W., 26 i 1967, *E. ?camaldulensis*"; 1♀ "Marden Rd., Torrens Valley, S.A., 13 iv 1967, T. C. R. White, *E. camaldulensis*". (Dried) 4♂s 10♀s "Mt Jerrabomberra, A.C.T., 30 v 1967, E. Lewis, *E. blakelyi*"; 1♀ "Moree, N.S.W., 20 iii 1918, W. W. Froggatt Collection"; 2♀s "Brisbane, 21 x 1935, Host blue gum", to NA.

Notes: Lerps round. This species is associated with *G. prepta* on *E. blakelyi* at A.C.T.; with *G. amydra* on *E. bridgesiana* at Rylstone, N.S.W.; with *G. blakei* on *Euc.* sp. at 107 mi. N. Clermont, Qld.; with *G. johnsoni* on *E. dealbata* at 10 mi. S. Narrabri, N.S.W.; with *G. johnsoni* at Rylstone, N.S.W., and with *G. amnicola* at Moree, N.S.W.

Glycaspis (*Glycaspis*) *mannifera* (Froggatt), comb. nov.

Spondyliaspsis mannifera Froggatt 1900, pp. 291-3, Pl. 12, figs. 2 & 10, Pl. 14, fig. 6.

Spondyliaspsis mannifera: Tuthill & Taylor 1955, p. 231.

Glycaspis mannifera: Taylor 1960, p. 385.

Glycaspis (*Alloglycaspis*) *mannifera*: Moore 1961, p. 157, Text-fig. 36.

Glycaspis (*Alloglycaspis*) *vellerosa*: Moore 1961, pp. 153-5, Text-fig. 32. *syn. nov.*

General Colour: Cream to yellow, suffused red, with few dark marks.

Claspers & Aedeagus: As in Text-fig. 94.
Length of Aedeagus: (7 specimens) 0.223 mm. to 0.256 mm.
Hindwings: Cu_1 as Group (iii).
Host Plants: *E. moluccana; ?E. polyanthemos.*
Type Locality: Tumut, New South Wales.
Types: Lectotype (here designated) 1♂ genitalia on slide labelled "Tumut, N.S.W., 18 x 1899, large sugar lerp, Type, N.S.W., *Spondyliasp. mannifera* (on back of label), (♂ genitalia only, remainder on card) *Eucalyptus; Glycaspis* (*Glycaspis*) *mannifera* (Frogg.) Lectotype". The remainder of this specimen is mounted on a card point, the pin bearing label data "Large sugar lerp, *Eucalyptus,* Tumut, 18 x 1899, Genitalia on side; Lectotype". Paralectotypes (here designated) 1♀ whole mount on slide labelled "Tumut, N.S.W., 18 x 1899, Large sugar lerp, *Eucalyptus, Glycaspis* (*Glycaspis*) *mannifera* (Frogg.) ♀, Paralectotype". 2♀s (dried specimens on cards on separate pins) each pin bearing label data "Large sugar lerp, *Eucalyptus,* Tumut, 18 x 99, Paralectotype".

There is no doubt that these four specimens are Froggatt's syntypes of *G. mannifera.*

The only male specimen (now the Lectotype) was originally placed by Froggatt on a card with a female specimen. The pin bore an additional label with the data "Type. N.S.W. *Spondyliasp. mannifera*", apparently in Froggatt's handwriting.

The wholemount female specimen on a slide, was originally placed by Froggatt on a second card with another female specimen. Consequently, designation of a Lectotype was necessary.

Other Specimens Examined: (slides) 2♂s "Prospect, N.S.W., 7 viii 1968, *E. moluccana*". (in alcohol) 12♀s "Prospect, N.S.W., 7 viii 1968, *E. moluccana*".

Notes: Lerps round. Froggatt records the habitat of *G. mannifera* as Tumut, N.S.W., and the host species as *E. polyanthemos, E. moluccana* (= *E. hemiphloia*) and *E. gracilis.* The two latter hosts do not naturally occur in the Tumut area, so that there remains some doubt as to the host associations of this species. According to Froggatt, the lerps of *G. mannifera* are round.

The possibility of seasonal variation in coloration eliminates the identification of *G. mannifera* on colour alone. Froggatt's fig. 10, Pl. 12, of the male claspers, obviously does not correspond with the figure of the claspers of the Lectotype (Text-fig. 94) of *G. mannifera.* Froggatt therefore appears to have had more than one species before him when describing and figuring his *G. mannifera.*

A series of specimens of *G. whitei* which constructs round lerps on *E. polyanthemos,* was collected 7 mi. E. Tumut on 12 i 1967. The aedeagus, and claspers which are scimitar-shaped are given in Text-fig. 70. These claspers compare favourably with Froggatt's fig. 10, Pl. 12, but not with those of the Lectotype. Specimens of *G. amnicola* which constructs oval lerps on *E. polyanthemos* were also collected at the same site on 25 ii 1969. It therefore seems unlikely that *G. mannifera* occurs on *E. polyanthemos,* and that the Lectotype was not collected at Tumut.

Glycaspis vellerosa Moore 1961 was described on specimens from *E. moluccana* from Prospect, N.S.W., but on re-examination of the type material, a correction to the drawings of the claspers was found to be necessary.

It is now determined that *G. vellerosa* Moore is a synonym of *G. mannifera* (Froggatt). Additional material from the type locality of *G. vellerosa* was obtained and examined.

Froggatt appears to have described this species from *E. moluccana* and figured the male genitalia of *G. whitei* from round lerps on *E. polyanthemos.*

The species *G. pervagata* which constructs round lerps on *E. gracilis,* is illustrated in Text-fig. 53.

Glycaspis (*Glycaspis*) *xanthopepla*, sp. nov.

(Gr. *xanthos* = yellow; *peplos* = robe or coat)

General Colour: Cream to yellow or pale orange, with few dark marks.
Claspers & Aedeagus: As in Text-fig. 95.
Length of Aedeagus: (2 specimens) both 0.212 mm.
Hindwings: Cu_1 as Group (ii).
Host Plant: *E. seeana* Maiden (narrow-leaved cabbage gum).
Type Locality: 1 to 2 mi. E. Plunkett, Queensland.
Types: Holotype male on slide labelled "1 to 2 mi. E. Plunkett, Qld., 13 iv 1966, *E. seeana*". Paratypes: (slide) 1♂ with same label data. (In alcohol) 6♀s, 2 nymphs, with same label data.
Notes: Lerps round. Specimens were reared.

Glycaspis (*Glycaspis*) *pratensis*, comb. nov.

Glycaspis (*Alloglycaspis*) *pratensis* Moore 1961, p. 151, Text-fig. 28.

Claspers & Aedeagus: As in Text-fig. 96.
Length of Aedeagus: (3 specimens) 0.223 mm. to 0.234 mm.
Hindwings: Cu_1 as Group (ii).
Host Plants: *E. amplifolia* Naudin (cumbora or cabbage gum); *E. tereticornis*.
Type Locality: Jilliby, New South Wales.
Specimens Examined: (slides) 1♂ "Mt. Archer, (Rockhampton) Qld., 1400', 28 iv 1966, *E. tereticornis*"; 2♂s "Prospect, N.S.W., 7 viii 1968, *E. ?tereticornis*"; 1♂ "12 mi. S. Coff's Hbr., N.S.W., 14 i 1958, I. F. B. Common". (In alcohol) 1♀ "Mt Archer, Qld., 1400', 28 iv 1966, *E. tereticornis*"; 2♀s "Bonnell's Bay, Lake Macquarie, N.S.W., 26 xii 1967, *E. ?tereticornis*".
Notes: Lerps round. A correction to the drawing of the claspers as previously given (Moore 1961), now shows the correct shape, on the left hand side in Text-fig. 96.

Glycaspis (*Glycaspis*) *australoraria*, comb. nov.

Glycaspis (*Alloglycaspis*) *australoraria* Moore 1961, p. 150, Text-fig. 26.

Claspers & Aedeagus: As in Text-fig. 97.
Length of Aedeagus: (1 specimen) 0.234 mm.
Hindwings: Cu_1 as Group (iii).
Host Plants: *E. longifolia* Link & Otto (Woolly butt); *E. amplifolia; E. tereticornis; E. punctata* DC. (grey gum).
Type Locality: Corrimal, New South Wales.
Specimens Examined: (slides) 3♂s "5 mi. S. Picton, N.S.W., 10 v 1969, *E. punctata*"; 2♂s "10 mi. N. Clouds Creek, N.S.W., 10 iv 1966, *E. amplifolia*"; 1♂ "Goodna, Qld., 19 vi 1967, R. A. Yule, *E. tereticornis*", to QF; 1♂ "Cooper's Plains, Brisbane, Qld., 10 ix 1914, H. Tryon, *Euc.* sp., 5440, C.I.E. Coll. 18123", to BM; 1♂ "Mt Lofty, S.A., A. M. Lea", to SM. (In alcohol) 1♂ 2♀s "10 mi. N. Clouds Crk., N.S.W., 10 iv 1966, *E. amplifolia*"; 10♂s 30♀s (with *G. ignea*) "5 mi. S. Picton, N.S.W.,10 v 1969, *E. punctata*"; 10♀s "Goodna, Qld., 19 vi 1967, *E. tereticornis*", to QF.
Notes: Lerps ? round.

Glycaspis (*Glycaspis*) *struicis*, comb. nov.

Glycaspis (*Alloglycaspis*) *struicis* Moore 1961, pp. 150-151, Text-fig. 27.

Claspers & Aedeagus: As in Text-fig. 98.
Length of Aedeagus: (19 specimens) 0.193 mm. to 0.218 mm.
Hindwings: Cu_1 as Group (ii).
Host Plant: *E. tereticornis*.
Type Locality: Merrylands, New South Wales.
Notes: Lerps round.

Glycaspis (*Glycaspis*) *montana*, comb. nov.

Glycaspis (*Alloglycaspis*) *montana* Moore 1961, p. 153, Text-fig. 30.

Claspers & Aedeagus: As in Text-fig. 99.
Length of Aedeagus: (8 specimens) 0.227 mm. to 0.248 mm.

Hindwings: Cu_1 as Group (ii).

Host Plant: *E. dunnii* Maiden (Dunn's white gum).

Type Locality: Clouds Crk., New South Wales.

Notes: Lerps round.

Glycaspis (*Glycaspis*) *baileyi*, comb. nov.

Glycaspis (*Alloglycaspis*) *baileyi* Moore 1961, pp. 148-9, Text-fig. 24.

Claspers & Aedeagus: As in Text-fig. 100.

Length of Aedeagus: (150 specimens) 0.203 mm. to 0.250 mm.

Hindwings: Cu_1 as Group (ii).

Host Plants: *E. saligna* Sm. (Sydney blue gum); *E. robusta* Sm. (swamp mahogany); *E. resinifera* Sm. (red mahogany).

Type Locality: Lisarow, New South Wales.

Specimens Examined: (in alcohol) 4♂s 5♀s "Ourimbah S.F., N.S.W., 16 v 1967, *E. saligna*". (Dried) 3♂s 12♀s "Lisarow, N.S.W., 30 v 1954, *E. saligna*"; 4♀s "Myall Riv. S. F., N.S.W., 10 ix 1953, W. Wells, *E. saligna*"; 1♂ "Clouds Crk. S.F., N.S.W., 12 ix 1952, O. Powloff, *E. saligna*"; 1♂ 1♀ "Bulga S.F., N.S.W., 13 ii 1953, O. Powloff, *E. saligna*"; 3♂s 3♀s "Craven Plateau, N.S.W., 13 xi 1952, O. Powloff, *E. saligna*".

Notes: Lerps round.

Glycaspis (*Glycaspis*) *imponens*, comb. nov.

Glycaspis (*Alloglycaspis*) *imponens* Moore 1961, p. 150, Text-fig. 25.

Claspers & Aedeagus: As in Text-fig. 101.

Length of Aedeagus: (44 specimens) 0.252 mm. to 0.286 mm.

Hindwings: Cu_1 as Group (ii).

Host Plant: *E. propinqua* Deane & Maiden (small-fruited grey gum).

Type Locality: Kincumber, New South Wales.

Notes: Lerps round.

Glycaspis (*Glycaspis*) *campbelli*, sp. nov.

(Named for my former colleague, Mr. K. G. Campbell, who willingly gave much valuable assistance with many of the writer's projects).

General Colour: Similar to *G. baileyi* and *G. imponens*.

Claspers & Aedeagus: As in Text-fig. 102.

Length of Aedeagus: (10 specimens) 0.256 mm. to 0.279 mm.

Hindwings: Cu_1 as Group (iii).

Host Plants: *E. cypellocarpa* L. Johnson (spotted mountain gum); *?E. cephalocarpa; ?E. ovata.*

Type Locality: Jigamy Crk., Eden, New South Wales.

Types: Holotype male on slide labelled "Jigamy Crk., Eden, N.S.W., 19 xi 1965, *E. cypellocarpa*". Paratypes: (slides) 2♂s with same label data as the holotype; 3♂s "Greig's Flat, Eden, N.S.W., 19 xi 1965, Reared from *E. cypellocarpa*"; 4♂s "1 mi. NE. Montrose, Vic., 27 xi 1966, *E. ovata* or *E. cephalocarpa*". (In alcohol) 4♂s 6♀s "Jigamy Crk., Eden, N.S.W., 19 xi 1965, *E. cypellocarpa*"; 15♂s 18♀s "Greig's Flat, Eden, N.S.W., 19 xi 1965, Reared from *E. cypellocarpa*"; 1♂ 6♀s "Greig's Flat, Eden, N.S.W., 19 xi 1965, *E. cypellocarpa*"; 37♂s 26♀s "1 mi. NE. Montrose, Vic., 27 xi 1966, *E. ovata* or *E. cephalocarpa*"; 34♂s 18♀s 2 nymphs, "1 mi. NE. Montrose, Vic., 27 xi 1966, *E. cephalocarpa*".

Notes: Lerps round.

Glycaspis (*Glycaspis*) *locaridensis*, comb. nov.

Glycaspis (*Alloglycaspis*) *locaridensis* Moore 1961, p. 161, Text-fig. 41.
Glycaspis (*Alloglycaspis*) *convallaria*: Moore 1961, p. 159, Text-fig. 39. *syn. nov.*

Claspers & Aedeagus: As in Text-fig. 103.

Length of Aedeagus: (5 specimens) 0.243 mm. to 0.267 mm.

Hindwings: As Group (iii).

Host Plants: *E. populnea; E. blakelyi* or *E. melliodora* A. Cunn. ex Schau. (yellow box).

Type Locality: Strahorn State Forest, New South Wales.

Specimens Examined: (slides) 2♂s "61 mi. N. Clermont, Qld., 2 v 1966, *E. ?populnea*"; 4♂s "4 mi. NE. Hillston, N.S.W., 25 i 1967, *E. ?populnea*"; 2♂s "27 mi. E. Cobar, N.S.W., 27 x 1957, I. F. B. Common"; 2♂s "3 mi. S. Hillston, N.S.W., 25 i 1967, *E. ?populnea*"; 2♂s "14 m. E. Cobar, N.S.W., 27 i 1967, *E. ?populnea*". (In alcohol) 4♀s "61 mi. N. Clermont, Qld., 2 v 1966, *E. ?populnea*". (Dried) 1♀ "27 mi. E. Cobar, N.S.W., 27 x 1957, I. F. B. Common".

Notes: Lerps oval. On re-examination of the type specimens, it is apparent that *G. locaridensis* and *G. convallaria* are synonymous. The latter is synonymised with the former because of the definite host record and some known biology of reared specimens of the former.

Glycaspis (*Glycaspis*) *amnicola*, comb. nov.

Glycaspis (*Alloglycaspis*) *amnicola* Moore 1961, pp. 159, 161, Text-fig. 40.

Claspers & Aedeagus: As in Text-fig. 104.

Length of Aedeagus: (6 specimens) 0.221 mm. to 0.248 mm.

Hindwings: Cu_1 as Group (ii).

Host Plants: *E. camaldulensis; E. ?tereticornis; E. polyanthemos.*

Type Locality: Tocumwal, New South Wales.

Specimens Examined: (slides) 1♂ "8 mi. S. Quorn, S.A., 23 x 1966, *E. ?camaldulensis*"; 1♂ "9 mi. W. Dubbo, N.S.W., 6 ix 1967, *E. camaldulensis*"; 2♂s "Gumeracha Weir, S.A., 23 v 1964, T. C. R. White; as eggs, emgd. 6-7 vi 1964, R.N. 64/1/10, *E. camaldulensis*"; 1♂ "2 mi. N. Sale, Vic., 6 i 1967, *E. ?tereticornis*"; 1♂ "North Balwyn, Vic., viii 1967, *E. camaldulensis*", to VM; 1♂ "Wellington, N.S.W., 28 x 1957, I. F. B. Common"; 1♂ "7 mi. E. Tumut, N.S.W., 25 ii 1969, *E. polyanthemos*"; 1♂ "2 mi. W. Loxton, S.A., 13 x 1957, R. V. Southcott, *?E. oleosa*"; 1♂ "Moree, N.S.W., 20 iii 1918, W.W.F., W. W. Froggatt Collection"; 1♂ "26 mi. S. Singleton, N.S.W., 23 iii 1957, E. F. Riek". (In alcohol) nymphs, lerps, "Gumeracha Weir, S.A., 23 v 1964, T. C. R. White, *E. camaldulensis*"; 8♀s "9 mi. W. Dubbo, N.S.W., 6 ix 1967, *E. camaldulensis*"; 6♀s "2 mi. N. Sale, Vic., 6 i 1967, *E. ?tereticornis*"; 1♀ "7 mi. E. Tumut, N.S.W., 25 ii 1969, *E. polyanthemos*"; 1♀ with same label data but date "12 i 1967". (Dried) 2♂s 9♀s "North Balwyn, Vic., viii 1967, *E. camaldulensis*", to VM; 1♀ "Moree, N.S.W., 20 iii 1918, W.W.F., W. W. Froggatt Collection"; 2♀s "Wellington, N.S.W., 28 x 1957, I. F. B. Common"; 1♀ "26 mi. S. Singleton, N.S.W., 23 iii 1957, E. F. Riek".

Notes: Lerps oval.

Glycaspis (*Glycaspis*) *prepta*, sp. nov.

(Gr. *preptos* = distinguished)

General Colour: Lemon-yellow to orange, sometimes with dark markings.

Claspers & Aedeagus: As in Text-fig. 105.

Length of Aedeagus: (7 specimens) 0.225 mm. to 0.254 mm.

Hindwings: Cu_1 as Group (ii).

Host Plants: *E. melliodora; E. blakelyi; E. ?longifolia; E. ?tereticornis; E. ?camaldulensis.*

Type Locality: 4 mi. NE. Goulburn, New South Wales.

Types: Holotype male on slide labelled "4 mi. N. Goulburn, N.S.W., 18 i 1967, *E. melliodora*". Paratypes: (slides) 5♂s "Mt. Jerrabomberra, A.C.T., 30 v 1967, E.b., E.L., *E. blakelyi*"; 1♂ "Prospect, N.S.W., 7 viii 1968, *E. ?tereticornis*"; 1♂ "6 mi. NE. Corryong, Vic., 8 i 1967, *E. ?camaldulensis*"; 6♂s 3♀s "Jigamy Crk., Eden, N.S.W., 30 x 1962, K. G. Campbell, *E. longifolia*"; 1♂ "Jigamy Crk., Eden, 19 xi 1965, *E. longifolia*"; 1♂ "Weetangera Rd., A.C.T., 9 iii 1954, F. Wheelhouse"; 1♂ "Capitol Hill, A.C.T., 13 iv 1951, K. L. Taylor, *E. blakelyi*". (In alcohol) 13♀s 4 nymphs "Jigamy Crk., Eden, N.S.W., 30 x 1962, K. G. Campbell, *E. longifolia*"; 2♂s 4♀s with same label data as the holotype; 4♀s "6 mi. NE. Corryong, Vic., 8 i 1967, *E. ?camaldulensis*"; 4♀s "Prospect, N.S.W., 7 viii 1968, *E. ?tereticornis*".

Other Specimens Examined: (Dried) 1♀ "Weetangera Rd., A.C.T., 9 iii 1954, F. Wheelhouse"; 1♀ "Capitol Hill, A.C.T., 13 iv 1951, K. L. Taylor, *E. blakelyi*".
Notes: Lerps oval.

Glycaspis (*Glycaspis*) *wiradjurae*, sp. nov.

(Of the Aboriginal tribe Wiradjuri who inhabited the type locality).

General Colour: Yellow lightly suffused red.
Claspers & Aedeagus: As in Text-fig. 106.
Length of Aedeagus: (1 specimen) 0.218 mm.
Hindwings: Cu_1 as Group (ii).
Host Plant: *E. oleosa* or *E. intertexta*.
Type Locality: 33 mi. N. Hillston, New South Wales.
Types: Holotype male on slide labelled "33 mi. N. Hillston, N.S.W., 26 i 1967, *E. oleosa* or *E. intertexta*". Paratypes: (in alcohol) 5♀s with same label data.

Glycaspis (*Glycaspis*) *permista*, comb. nov.

Glycaspis (*Alloglycaspis*) *permista* Moore 1961, p. 162, Text-fig. 43.

Claspers & Aedeagus: As in Text-fig. 107.
Length of Aedeagus: (5 specimens) 0.214 mm. to 0.225 mm.
Hindwings: Cu_1 as Group (ii).
Host Plant: *E. paniculata*.
Type Locality: Wamberal, New South Wales.
Specimen Examined: 1♂ "Gordon, N.S.W., 3 ix 1936, D. F. Waterhouse".
Notes: Lerps oval.

Glycaspis (*Glycaspis*) *schwarzi*, sp. nov.

(Named for Mr. E. A. Schwarz who studied these specimens from South Australia).

Spondyliaspis eucalypti Dobson (?): Schwarz 1898, pp. 69-71 (*non* Dobson).
Claspers & Aedeagus: As in Text-fig. 108.
Length of Aedeagus: (18 specimens) 0.239 mm. to 0.279 mm.
Hindwings: Cu_1 as Group (ii).
Host Plants: *E. leucoxylon; E. odorata; E. porosa.*
Type Locality: Tintinara, South Australia.
Types: Holotype male on slide labelled "Tintinara, S.A., 14 xi 1966, *E. leucoxylon*". Paratypes (slides) 1♂ with same label data as the holotype; 2♂s "Keith, S.A., 5 vi 1963, T. C. R. White, (eggs), emgd. 11 vi, adults 27-28 vi 63, *E. leucoxylon*", 1♂ to SM; 2♂s "Keith S.A., 1 viii 1963, T. C. R. White, (eggs), emgd. 2-5 viii, adults 20-27 viii 63, 20°C., 10 hr. light; *E. leucoxylon*", 1♂ to SM; 1♂ "Australia, Koebele, Type! *S. eucalypti* Schwarz, U.S.N.M. No. 3793, *E. leucoxylon*", to UM; 1♂ "Australia, Koebele, *E. leucoxylon*", to UM; 1♂ "Heywood Park, S.A., 5 ii 1956, R. V. Southcott, *E. leucoxylon*"; 1♂ "Second Crk., S.A., 9 x 1886, Tepper, *Eucalyptus* shrubs", to SM; 1♂ "Mt. Lofty, S.A., 5 vi 1884, Teinus", to SM; 1♂ "Mt. Lofty, S.A., 14 vii 1884, Tepper", to SM; 1♂ "Burnside, S.A., 5 vii 1884, Tepper", to SM.; 4♂s "5 mi. S. Quorn, S.A., 23 x 1966, *E. odorata*"; 2♂s "10 mi. E. Cleve, S.A., 20 x 1966, *E. odorata*"; 3♂s "41 mi. E. Elliston, S.A., 19 x 1966, *E. porosa*". (In alcohol) 1♀, nymphs, lerps "Keith, S.A., 1 viii 1963, T. C. R. White, *E. leucoxylon*, hatched 2-5 viii, emgd. 20-27 viii, 20°C., 10 hr. light. Rearing Nos. 6E, 12E, 14E, 15E"; 1♀ "Tintinara, S.A., 14 xi 1966, *E. ?leucoxylon*"; 1♂ 3♀s "10 mi. E. Cleve, S.A., 20 x 1966, *E. odorata*"; 2♂s 7♀s "5 mi. S. Quorn, S.A., 23 x 1966, *E. odorata*"; 10♂s 12♀s "41 mi. E. Elliston, S.A., 19 x 1966, *E. porosa*"; 1♂ 10♀s "3 mi. S. Wilmington, S.A., 24 x 1966, *E. ?odorata*". (Dried) 1♀ "Australia, Koebele, Type, No. 3793, U.S.N.M., *Spondyliaspis eucalypti* Schwarz, Type! *E. leucoxylon*", to UM.
Other Specimens Examined: (in alcohol) 2♀s "2 mi. E. Stokes Bay, Kangaroo Id., S.A., 4 xi 1966, *E. ?leucoxylon*"; 1♀ "42 mi. E. Elliston, S.A.,

19 x 1966, *Euc.* sp.". (Dried) 2♀s "Keith, S.A., 21 v 1966, T. C. R. White, *E. leucoxylon*", to SI; 1♂ with same label data but date "21 v 1963", to SI.; 2♀s "Burnside, S.A., 5 vii 1884, Tepper", to SM.

Notes: Eggs usually in groups of 2 or 3 to 12 or so (personal communication, T. C. R. White); lerps oval. From an examination of the series of Schwarz's specimens of *Spondyliaspis eucalypti* Dobson (?), it is quite clear that two species are involved.

The single mount of 1♂ and 1♀ on separate pins on the same piece of pith, labelled "*Eucalyptus leucoxylon*, Australia, Koebele, Type No. 3793, U.S.N.M., *Spondyliaspis eucalypti* Schwarz, Type!", are certainly *G. schwarzi*, while 4♂s and 4♀s paired on separate pins, together with 3♀s mounted singly on pith, are *G. fuscovena*. All specimens but the first two are labelled "Australia, Koebele" only. The specimens constituting the two species are separable on the vein Cu_1 of the hindwing, and usually on the fuscous basal venation of the forewing. Males are readily separable on the shape of the claspers, those of *G. fuscovena* being scimitar-shaped and dark in colour.

The confusing intergradation of coloration in this series is evident in Schwarz's description (pp. 69-70). His remarks (p. 71) that "The synonymy of these lerp psyllids will remain in an unsettled condition as long as the life history of each species is not properly known", is certainly relevant to some species of the genus today.

Glycaspis (*Glycaspis*) *sudicola*, sp. nov.

(L. *sudus* = cloudless, dry, clear; *-icola* = an inhabitant. Referring to the general weather pattern of the type locality).

General Colour: Lemon yellow to orange, marked with black.
Claspers & Aedeagus: As in Text-fig. 109.
Length of Aedeagus: (4 specimens) 0.236 mm. to 0.254 mm.
Hindwings: Cu_1 as Group (ii).
Host Plant: *E. sideroxylon* A. Cunn. ex Woolls. (mugga).
Type Locality: 4 mi. N. West Wyalong, New South Wales.
Types: Holotype male on slide labelled "4 mi. N. West Wyalong, N.S.W., 3 v 1964, *E. sideroxylon*". Paratypes: (slides) 3♂s 1♀ with same label data as the holotype; 3♂s "Deniliquin, N.S.W., gum scrub, 14 x 1905", ?(Froggatt), to NA. (In alcohol) 1♂ 9♀s lerps, with same label data as the holotype.
Other Specimens Examined: (slides) 3♂s "Deniliquin, N.S.W., 14 x 1905", ?(Froggatt), to NA; 1♂ "12 mi. E. Springsure, Qld., 3 iv 1957, I. F. B. Common". (Dried) 5♂s 1♀ "Deniliquin, N.S.W., 14 x 1905, ?(Froggatt), gum scrub", to NA; 8♀s with same label data; 2♀s with same label data, to BM; 1♀ "12 mi. E. Springsure, Qld., 3 iv 1957, I. F. B. Common".
Notes: Lerps oval; attached to leaf by bases of long axis sides only.

Glycaspis (*Glycaspis*) *ignea*, comb. nov.

Glycaspis (*Alloglycaspis*) *ignea* Moore 1961, p. 157, Text-fig. 37.

Claspers & Aedeagus: As in Text-fig. 110.
Length of Aedeagus: (16 specimens) 0.223 mm. to 0.239 mm.
Hindwings: Cu_1 as Group (ii).
Host Plants: *E. deanei* Maiden (Deane's gum); *E. punctata; E. ?longifolia.*
Type Locality: Ourimbah State Forest, New South Wales.
Specimens Examined: (slides) 1♂ "5 mi. S. Picton, N.S.W., 10 v 1969, *E. punctata*" (with *G. australoraria*); 1♂ "Mangrove Crk., N.S.W., 27 iv 1969, *E. deanei*". (In alcohol) 10♂s 30♀s (with *G. australoraria*) "5 mi. S. Picton, N.S.W., 10 v 1969, *E. punctata*".
Notes: Lerps oval to round.

Glycaspis (*Glycaspis*) *kurrajongensis*, comb. nov.

Glycaspis (*Alloglycaspis*) *kurrajongensis* Moore 1961, pp. 161-2, Text-fig. 42.

Claspers & Aedeagus: As in Text-fig. 111.

Length of Aedeagus: (17 specimens) 0.200 mm. to 0.216 mm.

Hindwings: Cu_1 as Group (ii).

Host Plant: *E. paniculata*.

Type Locality: Kurrajong, New South Wales.

Notes: Lerps oval.

Glycaspis (*Glycaspis*) *mellialata*, comb. nov.

Glycaspis (*Alloglycaspis*) *mellialata* Moore 1961, pp. 162-4, Text-fig. 44.

Claspers & Aedeagus: As in Text-fig. 112.

Length of Aedeagus: (7 specimens) 0.203 mm. to 0.225 mm.

Hindwings: Cu_1 as Group (ii).

Host Plant: *E. paniculata*.

Type Locality: Wyong State Forest, New South Wales.

Notes: Lerps oval.

Glycaspis (*Glycaspis*) *neureta*, sp. nov.

(Gr. *euretos* = easy to tell; *ne-* = not)

General Colour: Yellow to orange, sometimes with dark marks; seasonal variation.

Claspers & Aedeagus: As in Text-fig. 113.

Length of Aedeagus: (16 specimens) 0.236 mm. to 0.259 mm.

Hindwings: Cu_1 as Group (iii).

Host Plant: *E. melliodora*.

Type Locality: 10 mi. S. Breeza, New South Wales.

Types: Holotype male on slide labelled "10 mi. S. Breeza, N.S.W., 25 viii 1967, *E. melliodora*". Paratypes: (slides) 2♂s with same label data as the holotype; 1♂ "9 mi. N. Quirindi, N.S.W., 25 viii 1967, *E. melliodora*"; 1♂ "7 mi. N. Quirindi, N.S.W., 25 viii 1967, *E. melliodora*"; 1♂ "19 mi. N. Molong, N.S.W., 8 ix 1967, *E. melliodora*"; 1♂ "Tharwa Rd., A.C.T., 23 ix 1953, K. L. Taylor, *E. melliodora*"; 1♂ "5 mi. E. Cudgegong, N.S.W., 29 ix 1967, *E. melliodora*"; 1♂ "15 mi. E. Rylstone, N.S.W., 6 iv 1966, *E. melliodora*"; 1♂ "Rylstone, N.S.W., 1963, *Euc.* sp."; 2♂s "4 mi. NE. Goulburn, N.S.W., 18 i 1967, *E. melliodora*"; 2♂s "Black Mtn., A.C.T., 8 ix 1953, & 19 viii 1953, F. Wheelhouse, *E. melliodora*"; 2♂s "7 mi. NE. Goulburn, N.S.W., 18 i 1967, *E. ?melliodora*"; 1♂ "You Yangs, Vic., 24 xi 1966, *E. ?melliodora*"; 6♂s "Mt. Jerrabomberra, A.C.T., 30 v 1967, E m, E.L., *E. melliodora*". (In alcohol) 7♂s 23♀s "10 mi. S. Breeza, N.S.W., 25 viii 1967, *E. melliodora*"; 1♂ 5♀s "9 mi. N. Quirindi, N.S.W., 25 viii 1967, *E. melliodora*"; 6♂s 5♀s "7 mi. N. Quirindi, N.S.W., 25 viii 1967, *E. melliodora*"; 3♀s "15 mi. E. Rylstone, N.S.W., 6 iv 1966, *E. melliodora*"; 13♂s 10♀s "19 mi. N. Molong, N.S.W., 8 ix 1967, *E. melliodora*"; 2♂s 9♀s "5 mi. E. Cudgegong, N.S.W., 29 x 1967, *E. melliodora*"; 4♀s "7 mi. NE. Goulburn, N.S.W., 18 i 1967, *E. ?melliodora*"; 3♀s "You Yangs, Vic., 24 xi 1966, *E. ?melliodora*". (dried) 3♂s 10♀s "Mt. Jerrabomberra, A.C.T., 30 v 1967, E.m., 34, E.L., *E. melliodora*"; 1♂ with same label data but date "3 iv 1967".

Other Specimens Examined: (slides) 2♂s "Bendigo, Vic., 10 vi 1892, Froggatt, S. lerp scale", to NA. (dried) 1♀ "Tharwa Rd., A.C.T., 23 ix 1953, K. L. Taylor, *E. melliodora*"; 1♀ "Canberra, A.C.T., 11 iv 1951, K. L. Taylor, *E. melliodora*"; 3♀s "Bendigo, Vic., 10 vi 1892, Froggatt, S. lerp scale", to NA; 1♀ "Capitol Hill, A.C.T., 28 vii 1953, F. Wheelhouse, *E. melliodora*"; 1♀ "Yarralumla, A.C.T., 21 vii 1953, F. Wheelhouse, *E. melliodora*".

Notes: Lerps oval.

Glycaspis (*Glycaspis*) *oraria*, comb. nov.

Glycaspis (*Alloglycaspis*) *oraria* Moore 1961, p. 159, Text-fig. 38.

Claspers & Aedeagus: As in Text-fig. 114.

Length of Aedeagus: (5 specimens) 0.232 mm. to 0.248 mm.

Hindwings: Cu_1 as Group (ii).

Host Plant: Probably hybrid *E. robusta* X *E. resinifera.*
Type Locality: Mona Vale, New South Wales.
Notes: Lerps oval.

Glycaspis (*Glycaspis*) *amydra*, sp. nov.

(Gr. *amydros* = distinctly marked)

General Colour: Seasonal variation; lemon yellow with few dark marks, and red suffusion.
Claspers & Aedeagus: As in Text-fig. 115.
Length of Aedeagus: (12 specimens) 0.245 mm. to 0.270 mm.
Hindwings: Cu_1 as Group (iii).
Host Plants: *E. bridgesiana; E. goniocalyx; E. ?melliodora; E. mannifera* Mudie subspecies *maculosa* (R. T. Bak.) L. Johnson (red spotted gum).
Type Locality: 4 mi. E. Cudgegong, New South Wales.
Types: Holotype male on slide labelled "4 mi. E. Cudgegong, N.S.W,. 29 ix 1967, *E. bridgesiana*". Paratypes: (slides) 4♂s with same label data as the holotype; 3♂s "5 mi. E. Molong, N.S.W., 8 ix 1967, *E. bridgesiana*"; 2♂s "2 mi. E. Rylstone, N.S.W., 6 iv 1966, *E. bridgesiana*"; 1♂ "11 mi. SE. Mudgee, N.S.W., 31 i 1967, *E. bridgesiana*"; 1♂ "Mullion Ra. S.F., N.S.W., 12 iii 1969, *E. goniocalyx*"; 1♂ "Capitol Hill, A.C.T., 13 iv 1951, K. L. Taylor, *E. melliodora*"; 1♂ "Majura Lane, A.C.T., 25 viii 1953, F. Wheelhouse, *E. bridgesiana*"; 2♂s "Turner, A.C.T., 1 iv 1967, K. L. Taylor, *E. mannifera* ss. *maculosa*"; 1♂ "Black Mtn., A.C.T., 24 iii 1966, M. Upton, Light trap"; 2♂s "Black Mtn., A.C.T., 20 i 1966, M. Upton, Light trap". (In alcohol) 1♂ 6♀s "11 mi. SE. Mudgee, N.S.W., 31 i 1967, *E. bridgesiana*"; several ♂s ♀s with same label data as the holotype; 1♂ 1♀ "2 mi. E. Rylstone, N.S.W., 6 iv 1966, *E. bridgesiana*"; 10♀s "5 mi. E. Molong, N.S.W., 8 ix 1967, *E. bridgesiana*"; 3♀s "Mullion Ra. S.F., N.S.W., 12 iii 1969, *E. goniocalyx*".
Other Specimens Examined: (in alcohol) 2♂s 4♀s "5 mi. E. Cudgegong, N.S.W., 29 ix 1967, *E. ?bridgesiana*" (with *G. brimblecombei*); 1♂ "1 mi. W. Rylstone, N.S.W., 7 iv 1966, *Euc.* sp.". (Dried) 1♀ "Long Gully Lane, A.C.T., 17 iii 1955, F. Wheelhouse, *E. goniocalyx*"; 1♀ "Capitol Hill, A.C.T., 13 iv 1951, K. L. Taylor, *E. melliodora*"; 3♀s "Northbourne Ave., Turner, A.C.T., 1 iv 1967, K. L. Taylor, *E. mannifera* ss. *maculosa*".

Glycaspis (*Glycaspis*) *monita*, sp. nov.

(L. *monitus* = put in mind of. Referring to the similarity of the shape of the aedeagus with that of *G. brimblecombei* and *G. confinis*).

General Colour: Not recorded.
Claspers & Aedeagus: As in Text-fig. 116.
Length of Aedeagus: (1 specimen) 0.232 mm.
Hindwings: Cu_1 as Group (ii).
Host Plant: *E. fasciculosa.*
Type Locality: Keith, South Australia.
Types: Holotype male on slide labelled "Keith, S.A., 1 viii 1963, T. C. R. White, Bred, emgd. 19 viii 1963. Reared from *E. fasciculosa*".
Notes: Lerps round.

Glycaspis (*Glycaspis*) *lacustris*, sp. nov.

(L. *lacustris* = pertaining to a lake)

General Colour: Yellow to orange; lightly marked black; suffused red.
Claspers & Aedeagus: As in Text-fig. 117.
Length of Aedeagus: (4 specimens) 0.227 mm. to 0.239 mm.
Hindwings: Cu_1 as Group (ii).
Host Plant: *E. ovata.*
Type Locality: 5 mi. W. Lakes Entrance, Victoria.
Types: Holotype male on slide labelled "5 mi. W. Lakes Entrance, Vic., 6 i 1967, *E. ovata*". Paratypes: (slides) 3♂s with same label data. (In alcohol) 4♂s 7♀s with same label data.
Notes: Lerps oval.

Glycaspis (*Glycaspis*) *mesicola,* comb. nov.

Glycaspis (*Alloglycaspis*) *mesicola* Moore 1964a, p. 166, Text-fig. 8.
Glycaspis (*Alloglycaspis*) *ochros*: Moore, 1964a, p. 165, Text-fig. 6. *syn. nov.*

Claspers & Aedeagus: As in Text-fig. 118.
Length of Aedeagus: (7 specimens) 0.230 mm. to 0.248 mm.
Hindwings: Cu_1 as Group (ii).
Host Plant: *E. drepanophylla* F. Muell. ex Benth. (Bowen ironbark).
Type Locality: Brisbane, Queensland.
Specimens Examined: (slides) 1♂ "Goodna, Qld., 19 vi 1967, R. A. Yule, *E. drepanophylla*", to QF; 1♂ "Carnarvon Ra., Qld., 29 iii 1957, I. F. B. Common". (Dried) 7♀s "Carnarvon Ra., Qld., 29 iii 1957, I. F. B. Common".
Notes: Lerps are not known.

Glycaspis (*Glycaspis*) *deirada,* sp. nov.

(Gr. *deirados* = a summit. Referring to the type locality).

Claspers & Aedeagus: As in Text-fig. 119.
Length of Aedeagus: (4 specimens) 0.254 mm. to 0.265 mm.
Hindwings: Cu_1 as Group (i).
Host Plant: *E. dundasii* Maiden (Dundas blackbutt).
Type Locality: Fraser Range, SE. Western Australia.
Types: Holotype male on slide labelled "Fraser Ra., W.A., 11 x 1966, *E. dundasii*". Paratypes: (slides) 3♂s with same label data as the holotype. (In alcohol) 9♂s 6♀s with same label data.
Other Specimens Examined: 1♂ "10 mi. N. Norseman, W.A., 25 x 1958, I. F. B. Common".
Notes: Lerps rectangular.

There is apparently a complex of species throughout southern Western Australia, with close similarities in the morphology of the male aedeagi and claspers. Until a more intensive and extensive study of these species is made, known morphological characteristics are inadequate for the separation of the species.

The material at present classified as "the *deirada* complex", consists of the following specimens:- (slides) 1♂ "24 mi. E. Cocklebiddy, W.A., 13 x 1966, *E. salmonophloia*"; 1♂ "33 mi. E. Norseman, W.A., 10 x 1966, *E. ?campaspe*"; 4♂s "24 mi. S. Coolgardie, W.A., 8 x 1966, *Euc.* sp."; 3♂s "16 mi. S. Coolgardie, W.A., 7 x 1966, *E. salubris*"; 1♂ "4 mi. S. Coolgardie, W.A., 7 x 1966, *E. ?salmonophloia*"; 2♂s "2 mi. S. Coolgardie, W.A., 7 x 1966, *E. campaspe*"; 1♂ "3 mi. S. Kalgoorlie, W.A., 5 x 1966, *E. ?calycogona*"; 3♂s "2 mi. S. Kalgoorlie, W.A., 5 x 1966, *E. ?oleosa*"; 1♂ "44 mi. S. Menzies, W.A., 2 x 1966, *E. calycogona*"; 1♂ "Broad Arrow, W.A., 3 x 1966, *E. ?redunca*"; 1♂ "7 mi. E. Ravensthorpe, W.A., 28 ix 1966, *E. ?annulata*"; 2♂s "4 mi. S. Ravensthorpe, W.A., 28 ix 1966, *E. ?occidentalis*"; 5♂s "100 mi. N. Esperance, W.A., 30 ix 1966, *E. ?comitae-vallis*"; 3♂s "66 mi. N. Albany, W.A., 25 ix 1966, *E. cylindriflora*"; 2♂s "63 mi. N. Albany, W.A., 25 ix 1966, *E. ? annulata*"; 1♂ "21 mi. N. Albany, W.A., 23 ix 1966, *E. ?occidentalis*"; 2♂s "2 mi. E. Cape Naturaliste, W.A., 18 ix 1966, *E. cornuta*"; 2♂s "Crawley, Perth, W.A., 6 ix 1966, *E. gomphocephala*"; 2♂s "3.8 mi. N. Tuart Hill, W.A., 1 ix 1966, *E. gomphocephala*"; 2♂s "35 mi. E. Ceduna, S.A., 28 xi 1958, I. F. B. Common"; 2♂s "Lowaldie, S.A., 13 xi 1966, *E. ?foecunda*"; 1♂ "43 mi. E. Elliston, S.A., 19 x 1966, *E. foecunda*"; 1♂ "18 mi. S. Caiguna, W.A., 13 x 1966, *Euc.* sp."; 1♂ "Fraser Ra., W.A., 11 x 1966, *Euc.* sp."; 1♂ "20 mi. N. Norseman, W.A., 10 x 1966, *E. gracilis*"; 1♂ "Mingenew, W.A., 23 viii 1966, *E. ?rudis*"; 2♂s "28 mi. S. Coorow, W.A., 25 viii 1966, *E. leptophleba*"; 2♂s "Walebing, W.A., 2 v 1954, K. L. Taylor, *Euc.* sp."; 1♂ "Eba, S.A., 17 v 1953, G. F. Gross". (in alcohol) 1♀ "12 mi. E. Ivy Tank, S.A., 16 x 1966, *E. ?oleosa*"; 1♀ "Fraser Ra., W.A., 11 x 1966, *Euc.* sp."; 2♀s "33 mi. E. Norseman, W.A., 10 x 1966, *E. ?campaspe*"; 1♂ 13♀s "24 mi. S. Coolgardie, W.A., 8 x 1966, *Euc.* sp"; 1♂ 5♀s "16 mi. S. Coolgardie, W.A., 7 x 1966, *E. salubris*"; 8♀s "4 mi. S. Coolgardie, W.A., 7 x 1966, *E. ?salmonophloia*"; 1♂ 8♀s "2 mi. S. Coolgardie, W.A., 7 x 1966, *E. campaspe*"; 1♀ "3 mi. S. Kalgoorlie, W.A., 5 x 1966, *E. ?calycogona*"; 6♀s "3 mi. S. Kalgoorlie, W.A,. 5 x 1966, *E. ?calycogona* or *E. ?oleosa*"; 9♀s "2 mi. S. Kalgoorlie, W.A., 5 x 1966, *E. ?oleosa*"; 1♀ "44 mi. S. Menzies, W.A., 2 x 1966, *E. ?lesouefii*"; 2♀s "44 mi. S. Menzies, W.A., 2 x 1966, *E. ?lesouefii, E. ?calycogona*"; 6♀s "Broad Arrow, W.A., 3 x 1966, *E. ?redunca*"; 4♀s "4 mi. S. Ravensthorpe, W.A., 28 ix 1966, *E. ?occidentalis*"; 2♀s "7 mi. E. Ravensthorpe, W.A. 28 ix 1966, *E. ?annulata*"; 2♀s "11 mi. S. Ravensthorpe, W.A., 27 ix 1966, *E. platypus*"; 3♂s 18♀s "100 mi. N. Esperance, W.A., 30 ix 1966, *E. ?comitaevallis*"; 3♀s "2.5 mi. NW. Deep Riv., W.A., 20 ix 1966, *E. diversicolor*"; 3♀s "66 mi. N. Albany, W.A., 25 ix 1966, *E. cylindriflora*"; 4♀s "63 mi. N. Albany, W.A., 25 ix 1966, *E. ?annulata*"; 1♀ "21 mi. N. Albany, W.A., 23 ix 1966, *E. ?occidentalis*"; 1♀ "2 mi. E. Cape Naturaliste, W.A., 18 ix 1966, *E. cornuta*"; 2♀s "King's Park, Perth, W.A., 3 ix 1966, *E. gomphocephala*"; 4♀s Crawley, Perth, W.A., 6 ix 1966, *E. gomphocephala*"; 5♀s "3.8 mi. N. Tuart Hill, W.A., 1 ix 1966, *E. gomphocephala*"; 1♂ 12♀s "4.5 mi. N. Tuart Hill, W.A., 15 ix 1966, *E. gomphocephala*"; 2♀s "1 mi. N. Scarborough Beach, W.A., 8 ix 1966, *E. gomphocephala*"; 3♀s "3 mi. N. Scarborough Beach, W.A., 14 ix 1966, *E. gomphocephala*"; 2♀s "43 mi. E. Elliston, S.A., 19 x 1966, *E. foecunda*"; 2♀s "Fraser Ra., W.A., 11 x 1966, *Euc.* sp."; 1♀ "18 mi. S. Caiguna, W.A., 13 x 1966, *Euc.* sp."; 1♀ "28 mi. S. Coorow, W.A., 25 viii 1966, *E. loxophleba*". (dried) 2♀s "Walebing, W.A., 2 v 1954, K. L. Taylor, *Euc.* sp."; 1♀ "10 mi. N. Norseman, W.A., 25 xi 1958, I. F. B. Common"; 1♀ "35 mi. E. Ceduna, S.A., 28 xi 1958, I. F. B. Common".

Glycaspis (*Glycaspis*) *aurosala*, sp. nov.

(L. *aurosus* = golden; *ala* = a wing)

General Colour: Yellow to orange; few dark marks; sometimes suffused red; a broad whitish medio-dorsal area from base of genal processes to metascutellum.
Claspers & Aedeagus: As in Text-fig. 120.
Length of Aedeagus: (13 specimens) 0.220 mm. to 0.272 mm.
Hindwings: Cu_1 as Group (i).
Host Plant: *E. thozetiana.*
Type Locality: 29-31 mi. N. Clermont, Queensland.
Types: Holotype male on slide labelled "29 mi. N. Clermont, Qld., 1 v 1966, *E. thozetiana*". Paratypes: (slides) 5♂s with same label data as the holotype; 5♂s "60 mi. N. Thargomindah, Qld., 22 x 1957, I. F. B. Common"; 4♂s "16 mi. W. Charleville, Qld., 21 x 1957, I. F. B. Common". (in alcohol) 4♂s 20♀s with same label data as the holotype.
Other Specimens Examined: (dried) 5♀s "60 mi. N. Thargomindah, Qld., 22 x 1957, I. F. B. Common"; 3♀s "16 mi. W. Charleville, Qld., 21 x 1957, I. F. B. Common".
Notes: Lerps rectangular.

Glycaspis (*Glycaspis*) *emphanes*, sp. nov.

(Gr. *emphanes* = conspicuous)

General Colour: Creamy yellow to brown, with black markings and red suffusion. Dark markings on forewing as in Text-fig. 136.
Claspers & Aedeagus: As in Text-fig. 121.
Length of Aedeagus: (4 specimens) 0.248 mm. to 0.256 mm.
Hindwings: Cu_1 as Group (i).
Host Plant: *E. cambageana.*
Type Locality: 17 mi. N. Banana, Queensland.
Types: Holotype male on slide labelled "17 mi. N. Banana, Qld., 25 iv 1966,

E. cambageana". Paratypes: (slides) 1♂ with same label data as the holotype; 2♂s "21 mi. N. Clermont, Qld., 1 v 1966, *E. cambageana*". (in alcohol) 2♂s 10♀s nymphs, with same label data as the holotype; 3♂s 6♀s 12 nymphs, "21 mi. N. Clermont, Qld., 1 v 1966, *E. cambageana*". (dried) 1♂ '10 mi. N. Emerald, Qld., 4 iv 1957, I. F. B. Common".

Notes: Lerps rectangular. On any part of a leaf, and mostly singly. Some adults of this species were reared by the writer.

Glycaspis (Glycaspis) siliciflava, comb. nov.

Glycaspis (Alloglycaspis) siliciflava Moore 1961, pp. 165-6, Text-fig. 48.

Claspers & Aedeagus: As in Text-fig. 122.
Length of Aedeagus: (9 specimens) 0.216 mm. to 0.236 mm.
Hindwings: Cu_1 as Group (ii).
Host Plant: *E. robusta.*
Type Locality: Wamberal, New South Wales.
Notes: Lerps rectangular.

Glycaspis (Glycaspis) granulata (Froggatt), comb. nov.

Spondyliaspis granulata Froggatt 1901, pp. 293-4, Pl. 16, fig. 25.
Spondyliaspis granulata: Tuthill & Taylor 1955, p. 231.
Glycaspis granulata: Taylor 1960, p. 385.
Glycaspis (Alloglycaspis) granulata: Moore 1961, pp. 164-5, Text-figs. 46, 47.
Glycaspis (Alloglycaspis) mirabilis: Moore 1961, p. 164, Text-fig. 45. *syn. nov.*

Claspers & Aedeagus: As in Text-fig. 123 (of Lectotype).
Length of Aedeagus: (8 specimens) 0.252 mm. to 0.299 mm.
Hindwings: Cu_1 as Group (ii).
Host Plants: *E. botryoides* Sm. (bangalay); *E. grandis* Hill & Maiden (toolur); *?E. robusta; E. saligna.*
Type Locality: Botany, Sydney, New South Wales.
Types: Lectotype (here designated) 1♂ on slide labelled "*E. robusta*, Botany, N.S.W., Angle Sugar, 14.3.01, W.W.F., Type (♀) *S. granulata*, W.W.F., 1901, *Glycaspis (Glycaspis) granulata* (Froggatt), Lectotype". Paralectotype (here designated) 1♂ on slide labelled "*E. robusta*, Botany, N.S.W., Angle Sugar, 14.3.01, W.W.F., *Glycaspis (Glycaspis) granulata* (Froggatt), Paralectotype".
Other Specimens Examined: (slides) 1♂ "Boambee S.F., N.S.W., 5 iii 1962, K. G. Campbell, *E. grandis*"; 2♂s "Upper Allyn Riv., N.S.W., 1500', 9 ii 1961, I. F. B. Common & M. S. Upton"; 1♂ "Mt. Spec, Qld., 2900', 22 iv 1955, Norris & Common"; 3♂s "Sussex Inlet, N.S.W., 13 v 1969, *E. botryoides*". (in alcohol) 10♂s 27♀s 'Sussex Inlet, N.S.W., 13 v 1969, *E. botryoides*". (dried) 1♀ "Upper Allyn Riv., N.S.W., 9 ii 1961, I. F. B. Common & M. S. Upton"; 1♀ "Goodna, Qld., 1 viii 1967, R. A. Yule", to QF.
Notes: The paralectotype is the specimen illustrated in Text-fig. 46 (Moore 1961). The claspers and aedeagus of the Lectotype are now figured in Text-fig. 123 in this paper. The type label apparently written by Froggatt, and which was attached to the pin bearing a single card with 2 male specimens, bears the data "Type ♀". No female specimen has been found, so that the only syntypes available are the two male specimens. These two syntypes are now on separate slides as whole mounts, and labelled as indicated above. Lerps are rectangular.

Fig. 45. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *flavilabris* (Froggatt).

Fig. 46. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *eucalypti* (Dobson).

Fig. 47. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *minuscula*, comb. nov.

Fig. 48. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *egregia*, sp. nov.

Fig. 49. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *cnecosia*, sp. nov.

Fig. 50. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *suavis*, comb. nov.

Fig. 51. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *buxalis*, sp. nov.

Fig. 52. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *retrusa*, sp. nov.

Fig. 53. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *pervagata*, sp. nov.

Fig. 54. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *repentina*, comb. nov.

Fig. 55. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *collina*, sp. nov.

Fig. 56. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *brunneincincta*, sp. nov.

Fig. 57. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *dobsoni*, sp. nov.

Fig. 58. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *hadlingtoni*, sp. nov.

Fig. 59. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *rylstonensis*, sp. nov.

Fig. 60. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *grapta*, sp. nov.

Fig. 61. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *wanbiensis*, comb. nov.

Fig. 62. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *notialis*, sp. nov.

Fig. 63. Claspers & aedeagus of lectotype of *Glycaspis* (*Glycaspis*) *occidentalis*, comb. nov.

Fig. 64. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *yilgarniensis*, sp. nov.

Fig. 65. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *infucata*, sp. nov.

Fig. 66. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *felicitaris*, sp. nov.

Fig. 67. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *subita*, sp. nov.

Fig. 68. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *rivalis*, comb. nov.

Fig. 69. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *pilata*, comb. nov.

Fig. 70. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *whitei*, sp. nov.

Fig. 71. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *fuscovena*, sp. nov.

Fig. 72. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *wagaitjae*, sp. nov.

Fig. 73. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *caurina*, sp. nov.

Fig. 74. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *lucrosa*, sp. nov.

Fig. 75. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *anota*, sp. nov.

Fig. 76. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *wondjinae*, sp. nov.

Fig. 77. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *quornensis*, sp. nov.

Fig. 78. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *anomala*, sp. nov.

Fig. 79. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *johnsoni*, sp. nov.

Fig. 80. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *violae*, sp. nov.

Fig. 81. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *onychis*, sp. nov.

Fig. 82. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *lactea*, comb. nov.

Fig. 83. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *hackeri*, comb. nov.

Fig. 84. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *rubritincta*, sp. nov.

Fig. 85. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *exsertae*, sp. nov.

Fig. 86. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *froggatti*, sp. nov.

Fig. 87. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *blakei*, sp. nov.

Fig. 88. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *eremica*, sp. nov.

Fig. 89. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *taylori*, sp. nov.

Fig. 90. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *gradata*, sp. nov.

Fig. 91. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *confinis*, sp. nov.

Fig. 92. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *wakelburae*, sp. nov.

Fig. 93. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *brimblecombei*, comb. nov.

Fig. 94. Claspers & aedeagus of lectotype of *Glycaspis* (*Glycaspis*) *mannifera*, comb. nov.

Fig. 95. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *xanthopepla*, sp. nov.

Fig. 96. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *pratensis*, comb. nov.

Fig. 97. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *australoraria*, comb. nov.

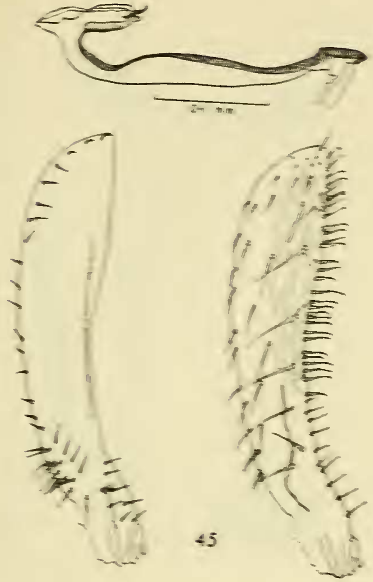
Fig. 98. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *struicis*, comb. nov.

Fig. 99. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *montana*, comb. nov.

Fig. 100. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *baileyi*, comb. nov.

Fig. 101. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *imponens*, comb. nov.

Fig. 102. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *campbelli*, sp. nov.
Fig. 103. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *locuridensis*, comb. nov.
Fig. 104. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *amnicola*, comb. nov.
Fig. 105. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *prepta*, sp. nov.
Fig. 106. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *wiradjurae*, sp. nov.
Fig. 107. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *permista*, comb. nov.
Fig. 108. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *schwarzi*, sp. nov.
Fig. 109. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *sudicola*, sp. nov.
Fig. 110. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *ignea*, comb. nov.
Fig. 111. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *kurrajongensis*, comb. nov.
Fig. 112. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *mellialata*, comb. nov.
Fig. 113. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *neureta*, sp. nov.
Fig. 114. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *oraria*, comb. nov.
Fig. 115. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *amydra*, sp. nov.
Fig. 116. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *monita*, sp. nov.
Fig. 117. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *lacustris*, sp. nov.
Fig. 118. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *mesicola*, comb. nov.
Fig. 119. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *deirada*, sp. nov.
Fig. 120. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *aurosela*, sp. nov.
Fig. 121. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *emphanes*, sp. nov.
Fig. 122. Claspers & aedeagus of *Glycaspis* (*Glycaspis*) *siliciflava*, comb. nov.
Fig. 123. Claspers & aedeagus of lectotype of *Glycaspis* (*Glycaspis*) *granulata*, comb. nov.



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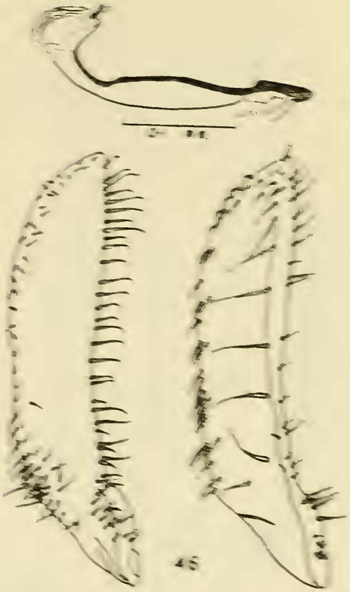

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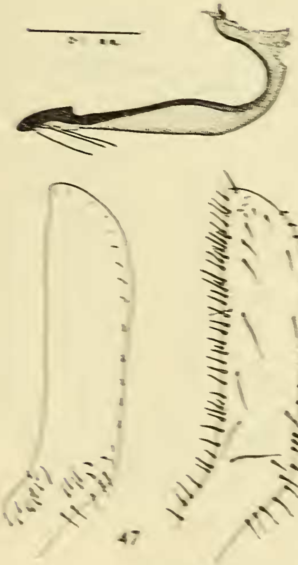

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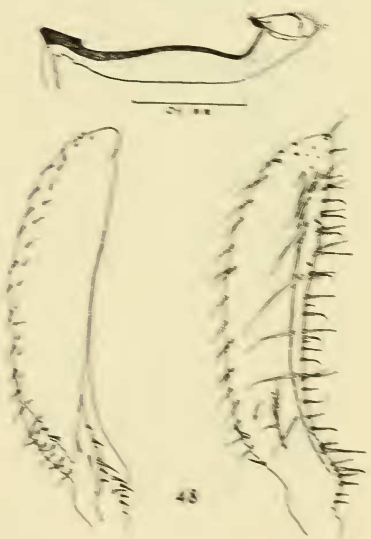

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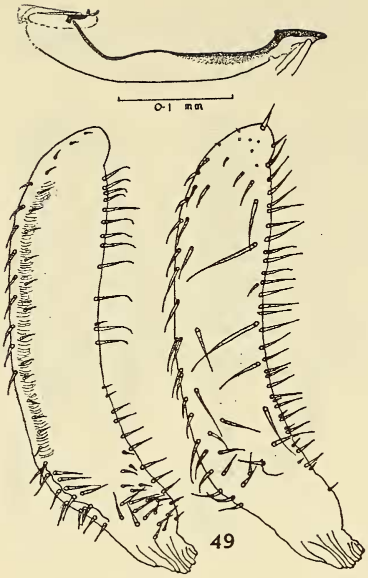

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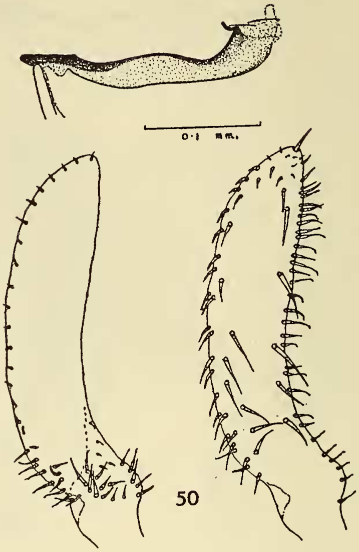

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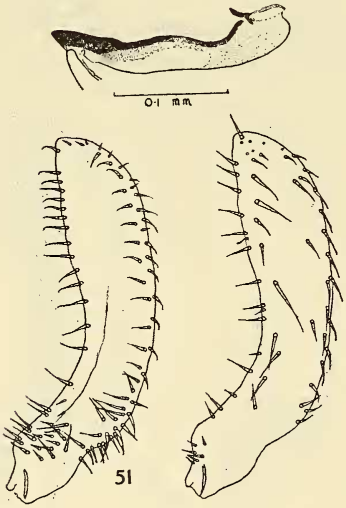

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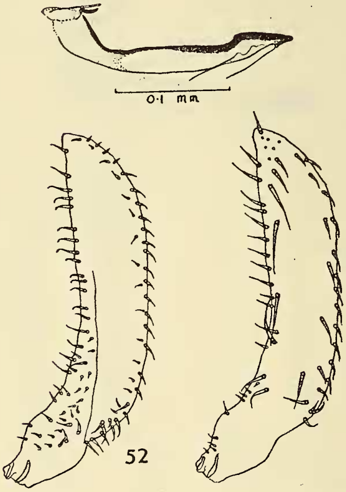

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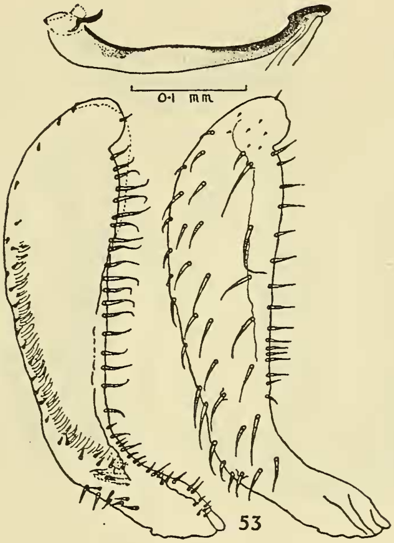

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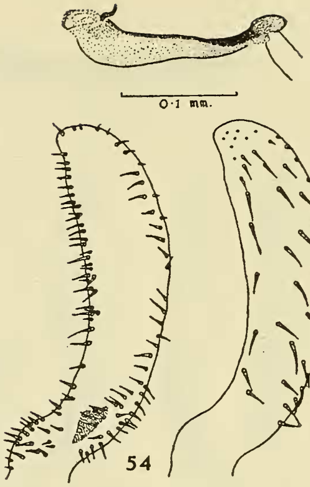

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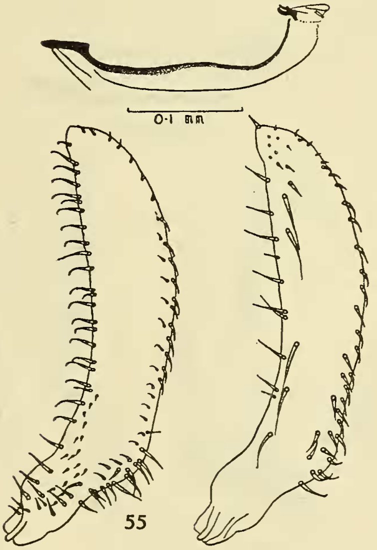

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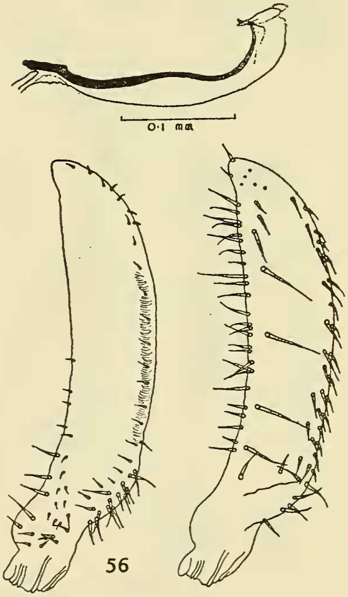

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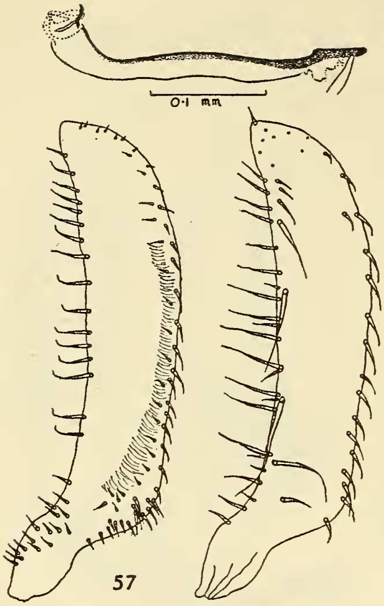

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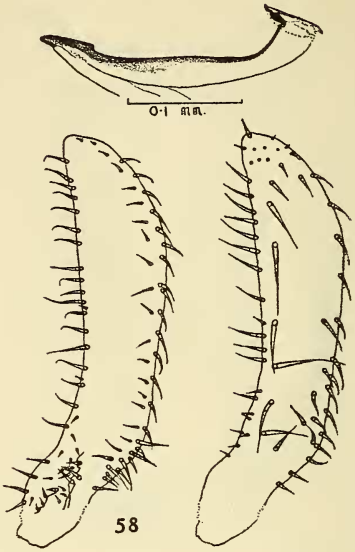

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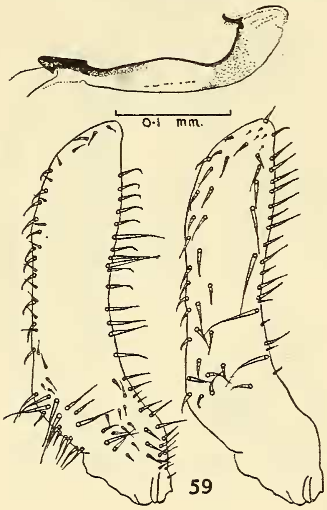

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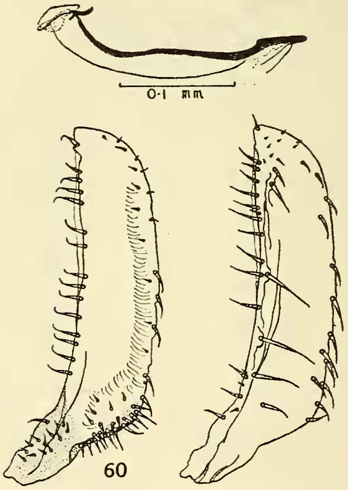

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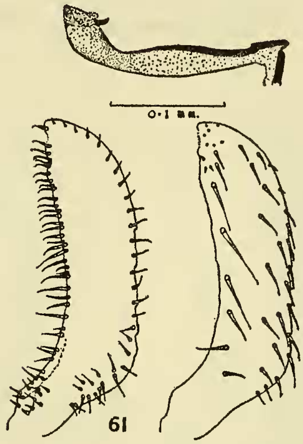

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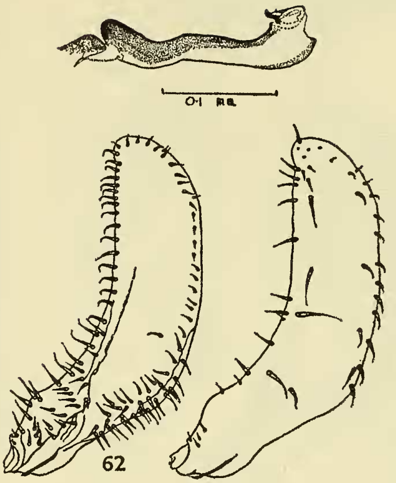

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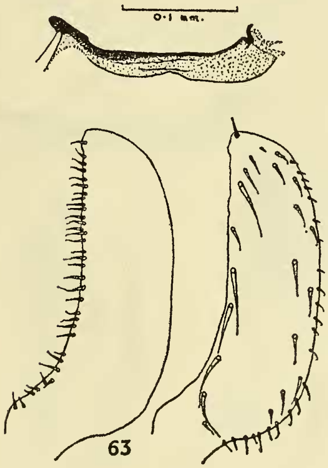

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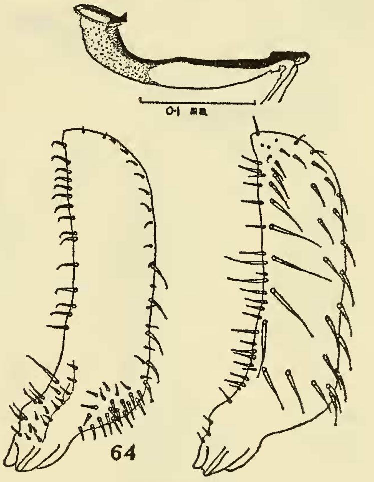

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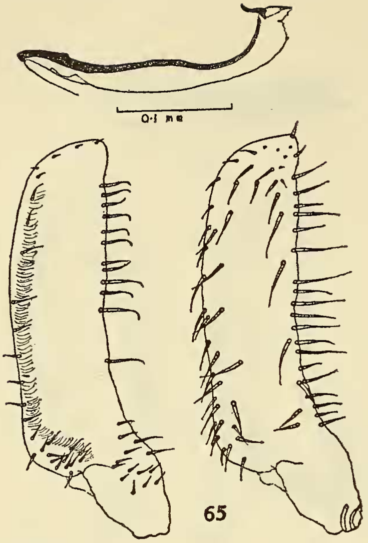

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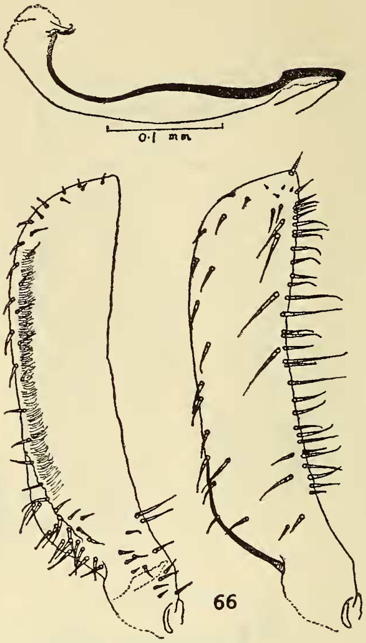

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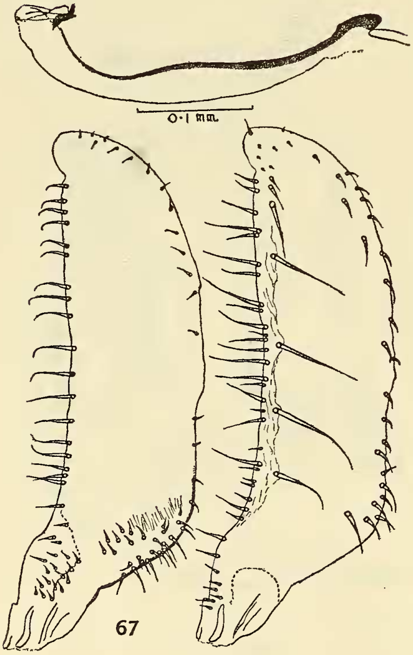

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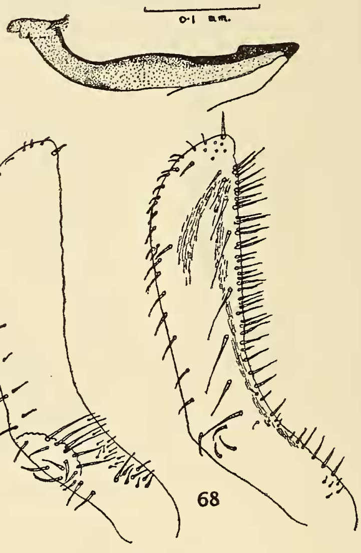

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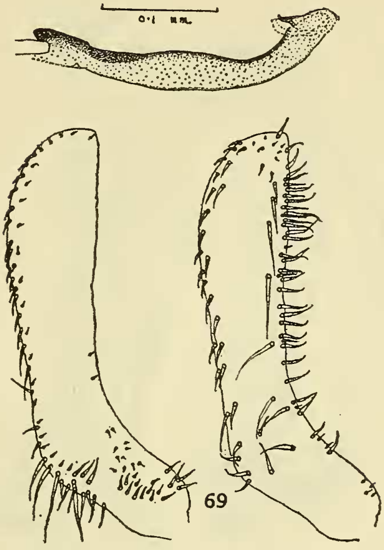

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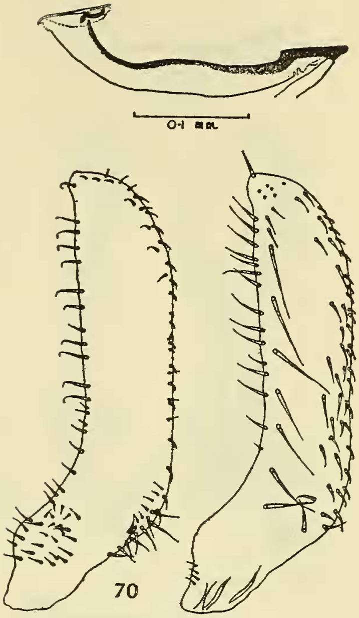

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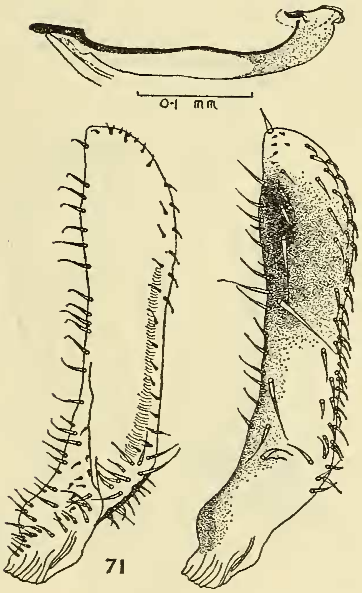

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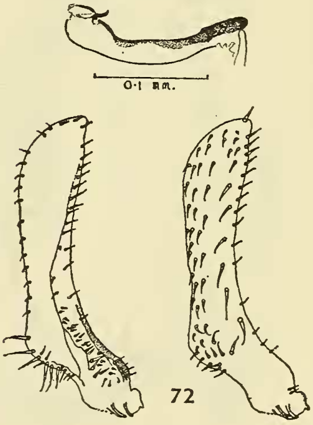

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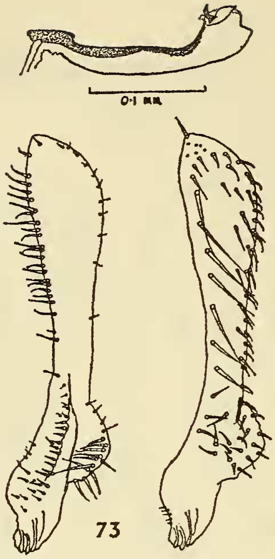

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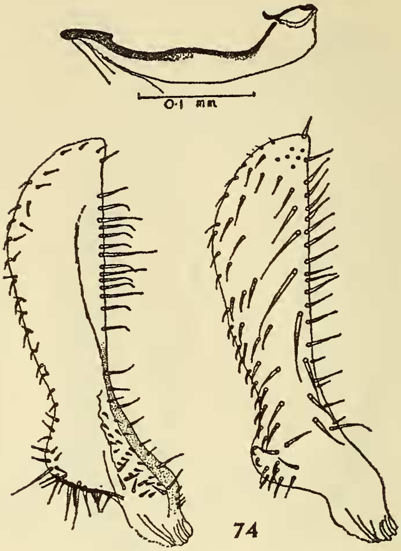

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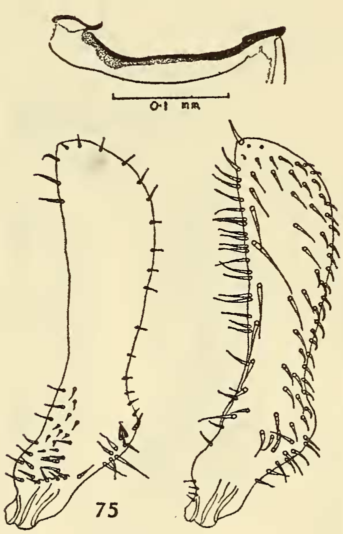

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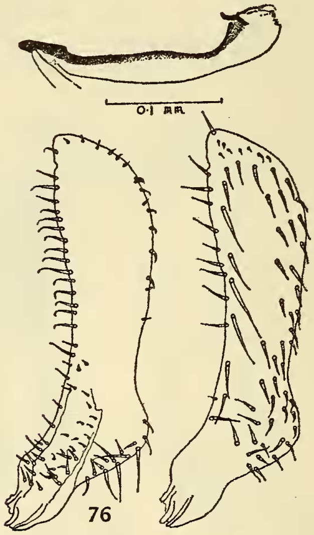

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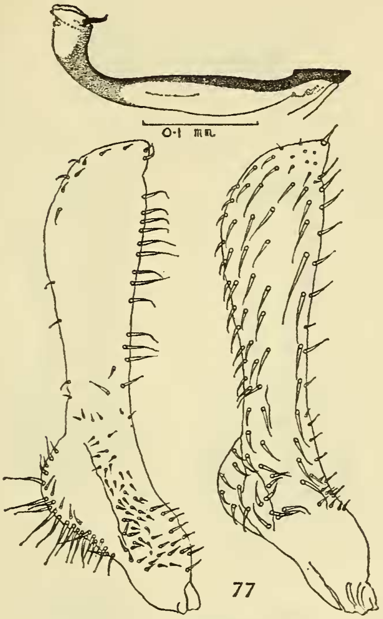

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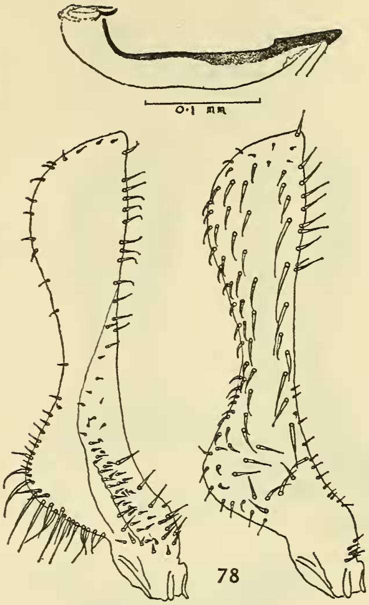

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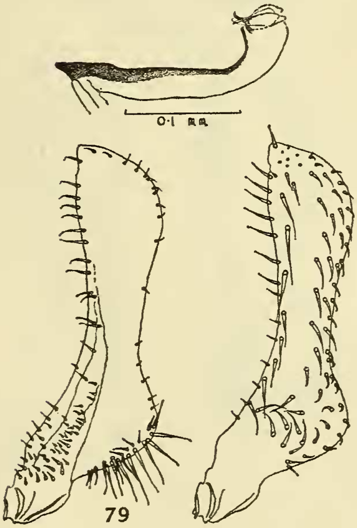

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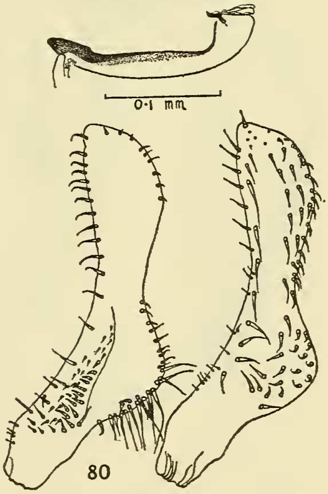

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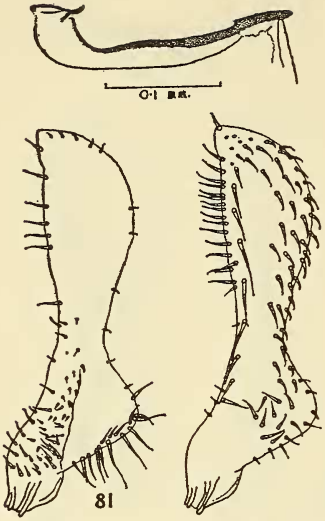

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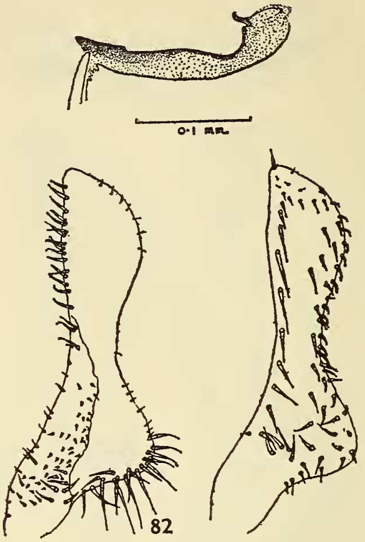

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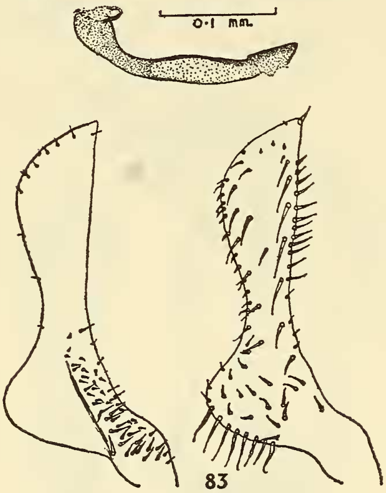

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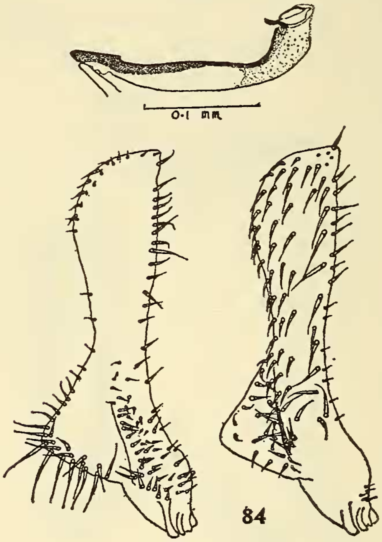

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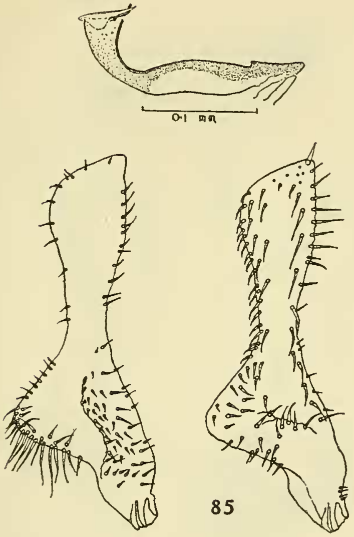

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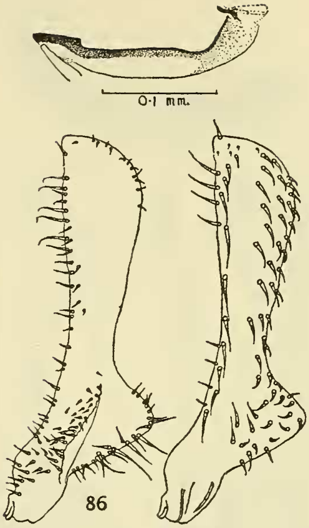

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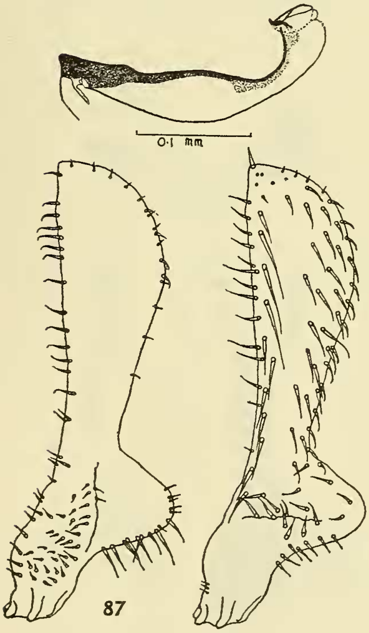

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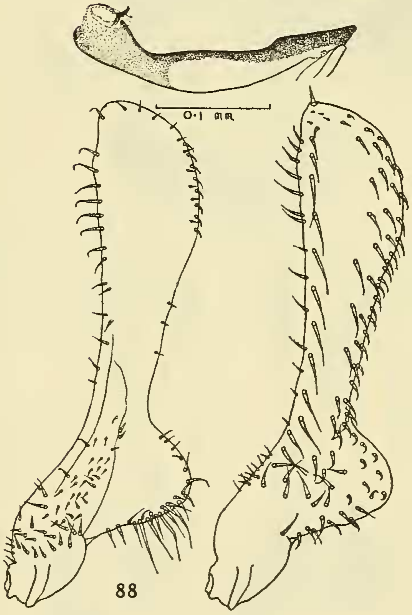

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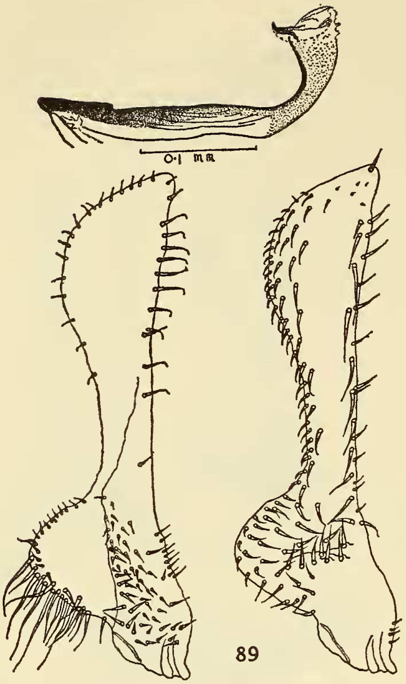

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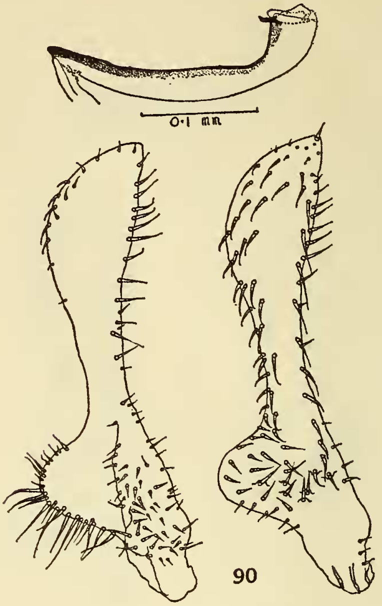

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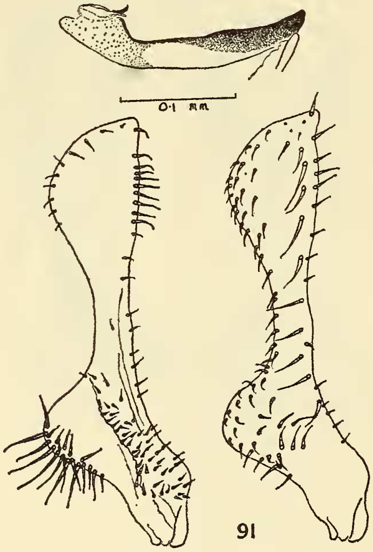

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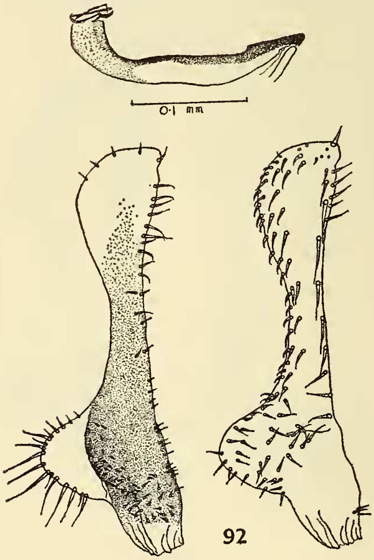

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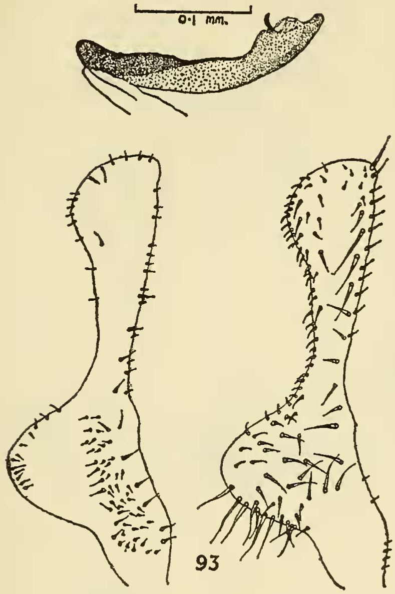
(For explanation of figures, see page 309)



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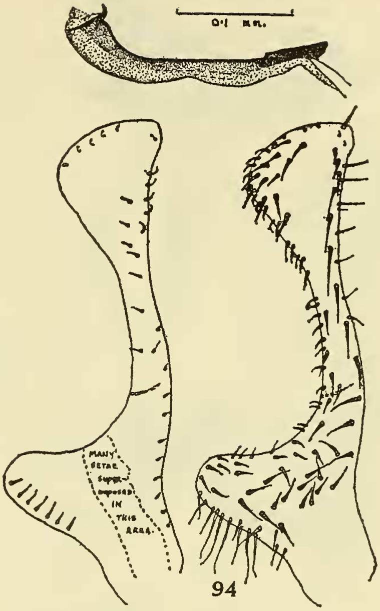

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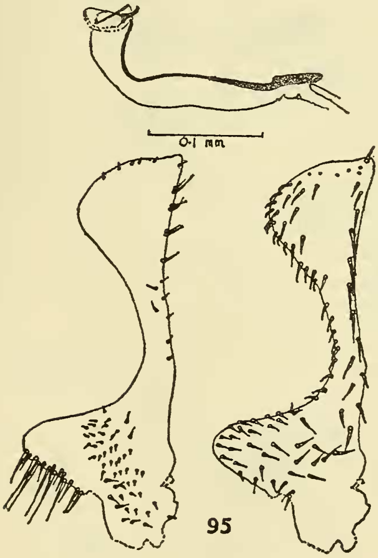

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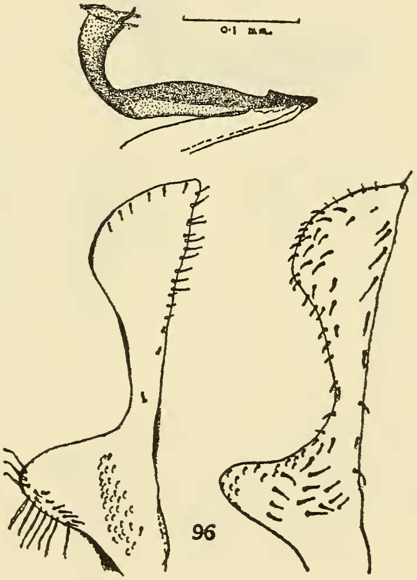

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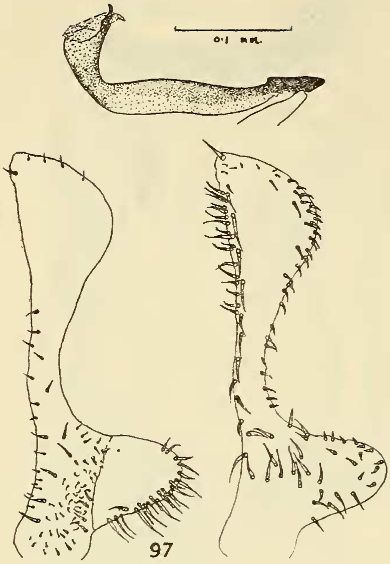
(For explanation of figures, see page 309)



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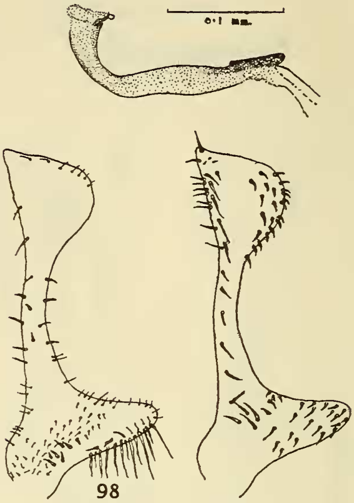

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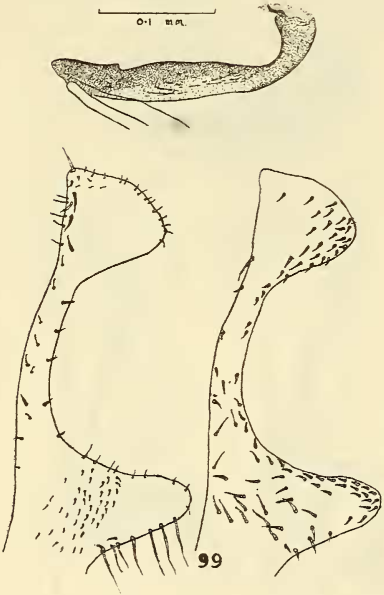

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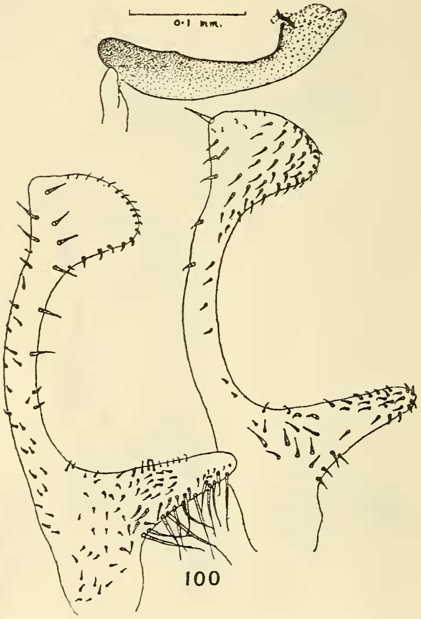

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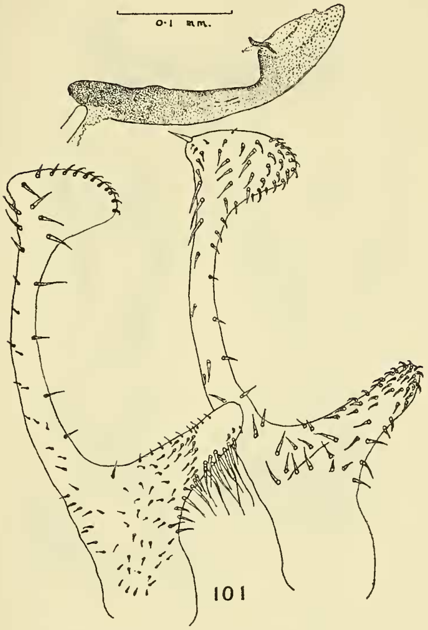
(For explanation of figures, see page 309)



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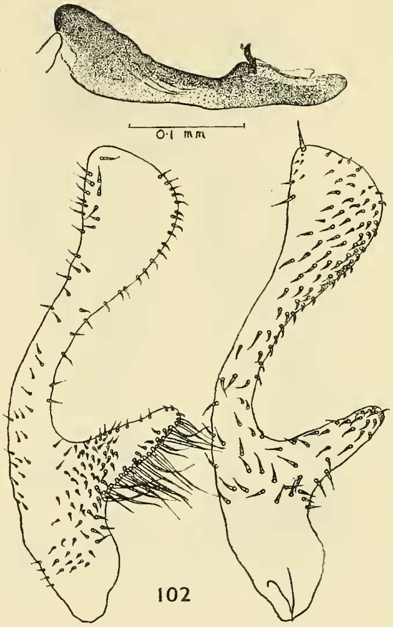

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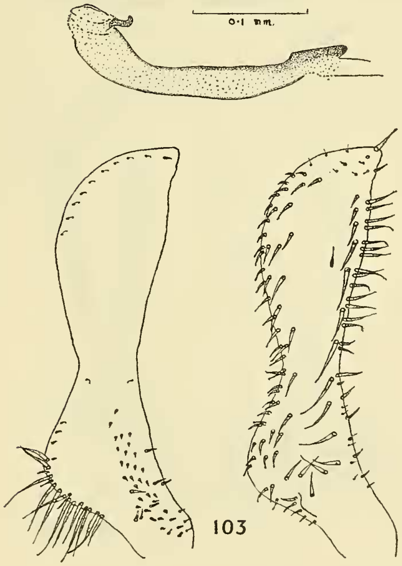

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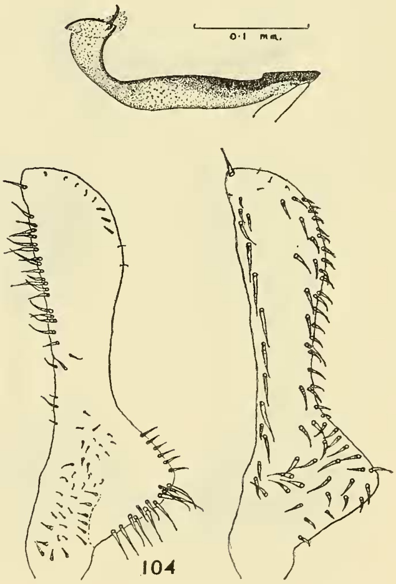

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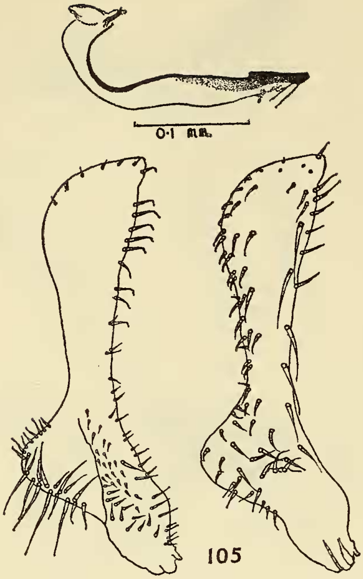

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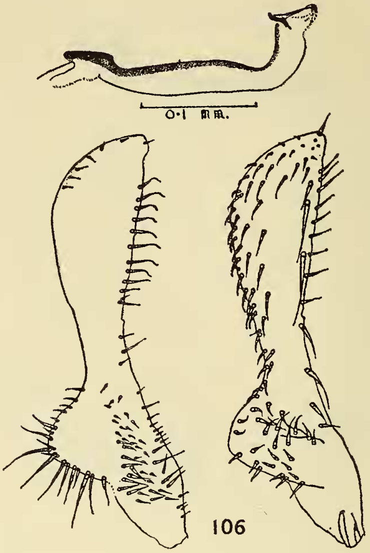

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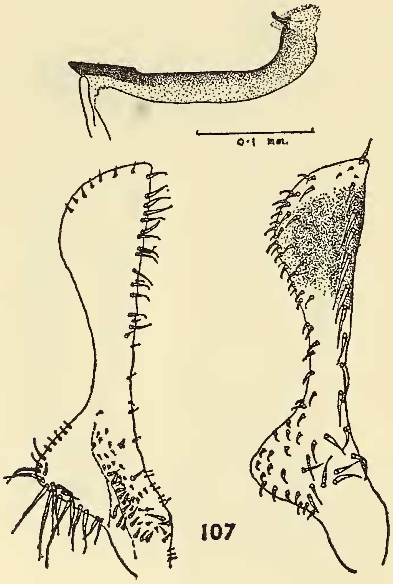

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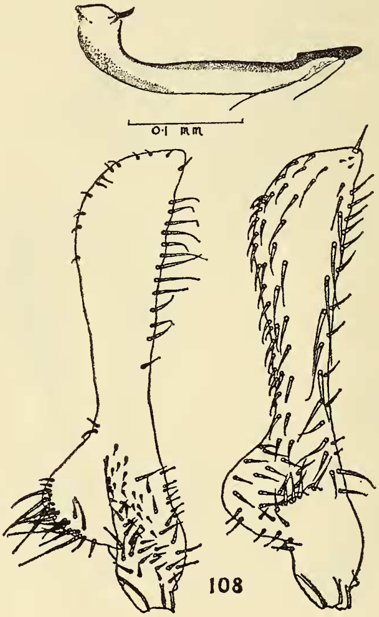

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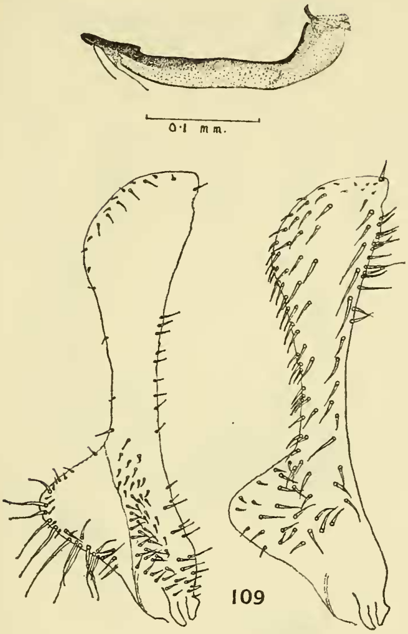

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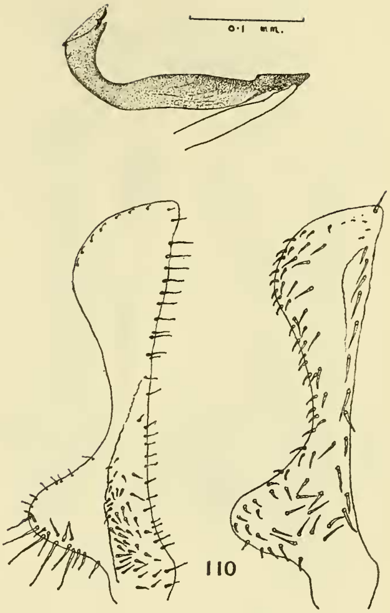

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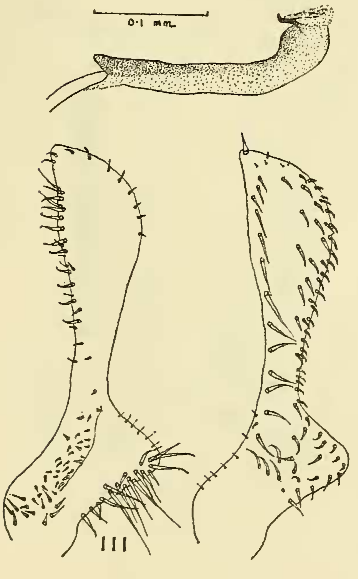

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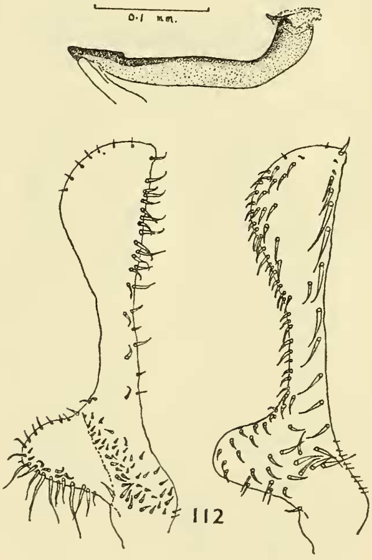

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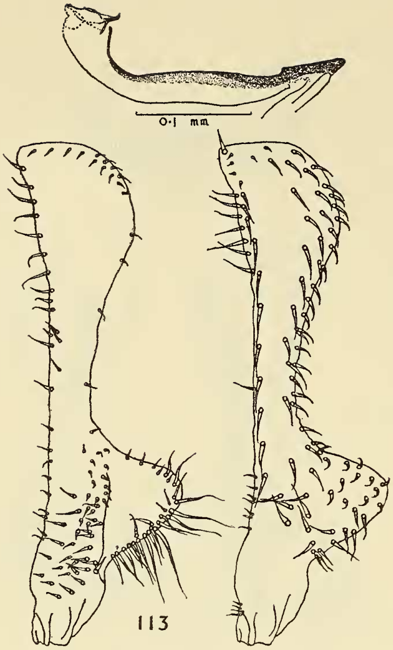

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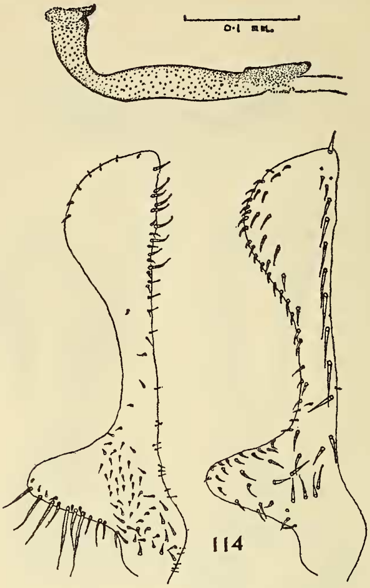

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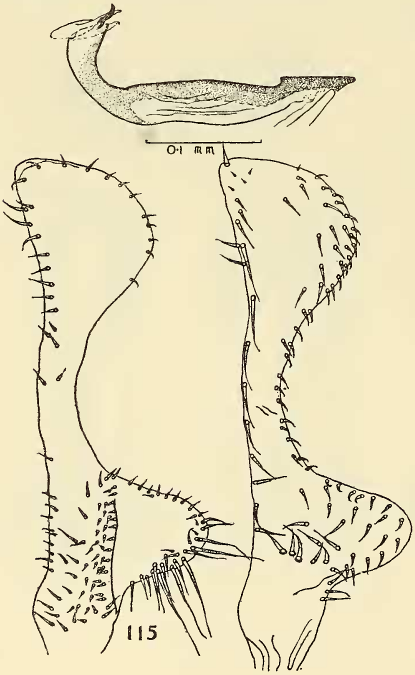

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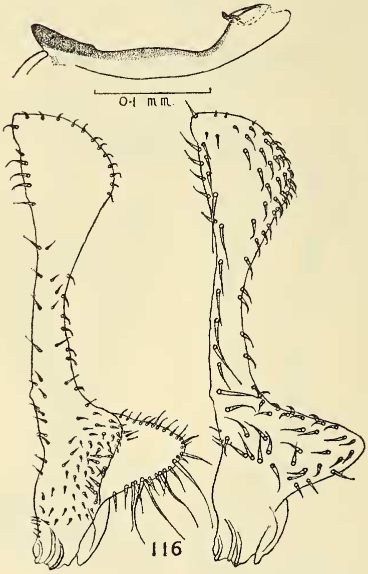

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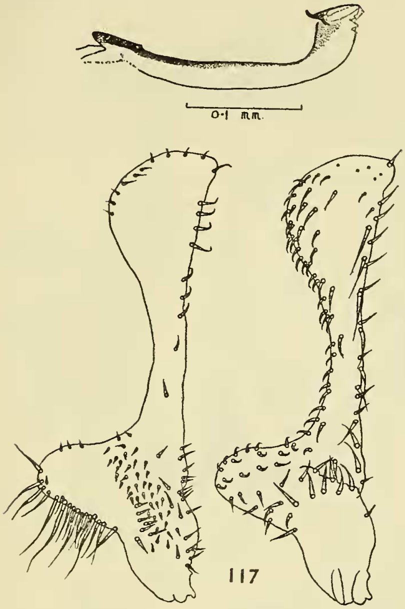
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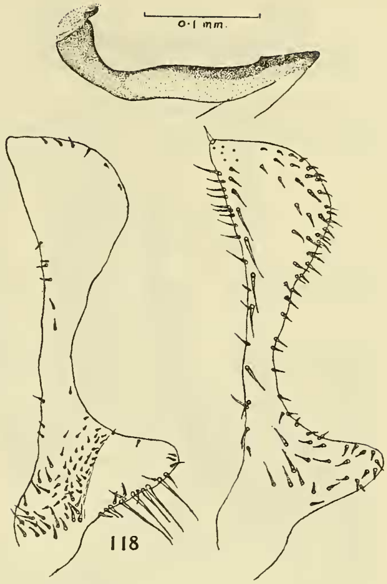
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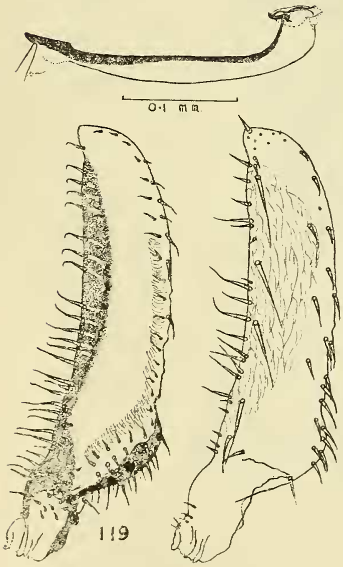
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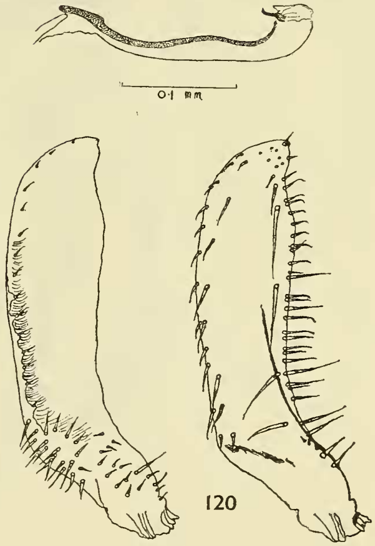
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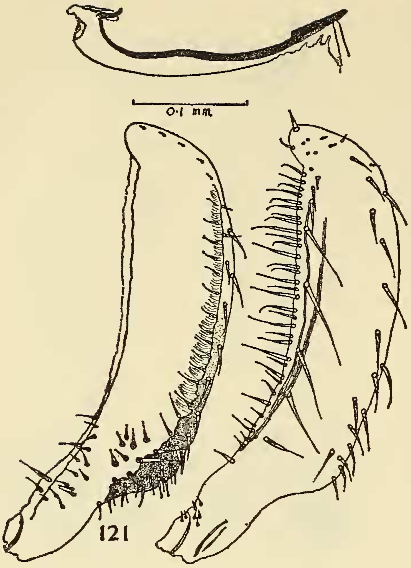

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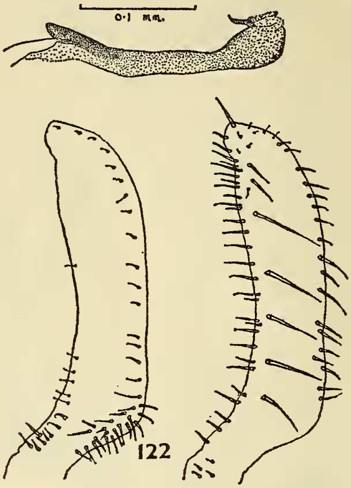

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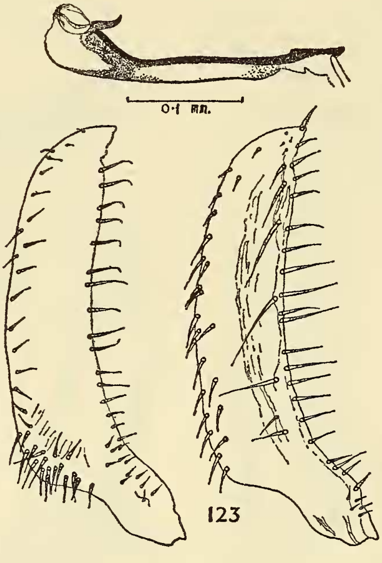


123

(For explanation of figures, see page 310)

Subgenus *Boreioglycaspis*

Glycaspis (*Boreioglycaspis*) Moore 1964, pp. 221-3, Text-fig. 7, 8, 10, 11, 13, 14.
Type Species: *Glycaspis* (*Boreioglycaspis*) *melaleucae* Moore.

To the three Australian and four exotic species previously described (Moore 1964), a further five Australian species are added, to give a total of twelve species in this subgenus.

Previously recorded morphological characters used for the delimitation of the subgenus (Moore 1964) require slight alteration i.e. the aspect of the genal processes is variable from almost horizontal to vertical.

Glycaspis (*Boreioglycaspis*) *melaleucae*

Moore 1964, pp. 223-224, Text-figs. 14, 15, 25.

General Colour: Cream to orange, with variable dark markings.

Claspers & Aedeagus: As in Text-fig. 124.

Host Plants: *Melaleuca quinquenervia* (Cav.) S. T. Blake; *M. leucadendron* (L.); *M. argentea* W. V. Fitzg.; *M. nervosa* (Lindl.) Cheel.

Type Locality: 14¼ mi. W. Grafton, New South Wales.

Specimens Examined: (slides) (from *M. quinquenervia*) 1♂ "Umina, N.S.W., 12 vi 1967". (from *M. leucadendron*) 1♂ "Cape Riv., 70 mi. S. Charters Towers, Qld., 3 v 1966"; 1♂ "Mt. Surprise, Qld., 22 v 1966"; 1♂ "Einasleigh Riv., Qld., 22 v 1966"; 1♂ "6 mi. S. Quamby, Qld., 30 v 1966"; 1♂ "0.5 mi. S. Howard Spgs., N.T., 3 vii 1966, *M. ?leucadendron*"; 2♂s "Upper Victoria Riv. X-ing, N.T., 7 vii 1966, *M. ?leucadendron*"; 2♂s "25 mi. S. Turkey Crk., W.A., 13 vii 1966"; 1♂ "King Leopold Ra., W.A., 19 vii 1966, *M. ?leucadendron*"; 2♂s "Lennard Riv., W.A., 20 vii 1966, *M. ?leucadendron*"; 1♂ "Yule Riv., W.A., 31 vii 1966"; 1♂ "Millstream Lagoon, W.A., 3 viii 1966. (from *M. argentea*) 2♂s "Cooinda, N.T., 23 vi 1966, *M. ?argentea*"; 1♂ "East Alligator Riv., N.T., 23 vi 1966, *M. ?argentea*"; 2♂s "Geikie Gorge, W.A., 15 vii 1966". (from *M. nervosa*) 1♂ "3 mi. E. Broome, W.A., 21 vii 1966". (host unknown) 1♂ "Tweed Riv., N.S.W., 25 xi 1922, W.W.F." (Froggatt); 2♂s "Toowoomba, Qld., 21 x 1963, H. M. Brookes", (to SI). (In alcohol): (from *M. quinquenervia*) 3♂s 6♀s "12 mi. W. Grafton, N.S.W., 10 iv 1966"; 1♂ 7♀s "2 mi. S. Tweed Hds., N.S.W., 11 iv 1966"; 1♀ "Redlands Bay, Qld., 13 iv 1966" 3♂s 6♀s "Toowoon Bay, N.S.W., 28 iv 1967"; 1♂ 2♀s "Umina, N.S.W., 12 vi 1967". (from *M. leucadendron*) 4♂s 13♀s "Cape Riv., Qld., 3 v 1966"; 3♀s "Mt. Surprise, Qld., 22 v 1966"; 1♂ 3♀s "Einasleigh Riv., Qld., 22 v 1966"; 2♀s "6.5 mi. S. Quamby, Qld., 30 v 1966"; 2♀s "0.5 mi. S. Howard Spgs., N.T., 3 vii 1966, *M. ?leucadendron*"; 2♀s "Rum Jungle, N.T., 4 vii 1966, *M. ?leucadendron*"; 3♂s 9♀s "Upper Victoria Riv. Crossing, N.T., 7 vii 1966, *M. ?leucadendron*"; 4♂s 11♀s "25 mi. S. Turkey Ck., W.A., 13 vii 1966"; 1♂ 8♀s "Mary Riv., W.A., 14 vii 1966, *M. ?leucadendron*"; 2♀s "King Leopold Ra., W.A., 19 vii 1966, *M. ?leucadendron*"; 18♂s 24♀s "Lennard Riv., W.A., 20 vii 1966, *M. ?leucadendron*"; 1♂ 5♀s "Yule Riv., W.A., 31 vii 1966"; 2♂s 10♀s "Millstream Lagoon, W.A., 3 viii 1966". (from *M. argentea*) 4♂s 6♀s "Cooinda, N.T., 23 vi 1966"; 2♂s 9♀s "Cooinda, N.T., 23 vi 1966, *M. ?argentea*"; 4♂s 8♀s "E. Alligator Riv., N.T., 23 vi 1966, *M. ?argentea*"; 1♂ 13♀s "Geikie Gorge, W.A., 15 vii 1966"; 8♂s 8♀s with same label data; 1♂ 1♀ with same label data. (from *M. nervosa*) 1♀ "Mary Riv., N.T., 25 vi 1966"; 2♀s "3 mi. E. Broome, W.A., 21 vii 1966"; 1♀ "15 mi. S. Darwin, N.T., 3 vii 1966, *M. ?nervosa*". (dried specimens) 5♂s 10♀s "Tweed Riv., N.S.W., 25 xi 1922, W. W. Froggatt, ti-tree wool"; 5♂s 11♀s "Toowoomba, Qld., 21 x 1963, H. M. Brookes", to SI; 1♀ "McArthur Riv., Gulf, N.T., 1 vi 1961—18 vii 1961, A. Fricker".

Notes: The following constant coloration serves to distinguish the species:- anterior and median femora narrowly edged black distally; a narrow longitudinal black line from distal edges of anterior femora to half the length of each femur. Specimens from Umina, collected during winter (June) are more darkly marked than any others. Specimens from Lennard River, W.A., collected during July, are marked brown rather than black, and the colouring is less distinct. The claspers and aedeagi of males show specific stability, although there is slight variation in the number of dark spines on the claspers. This species occasionally produces some flocculence at the tips of some shoots. This is apparently referred to on specimens labelled by Froggatt, as "ti-tree wool". A forewing is illustrated in Text-fig. 137.

Glycaspis (*Boreioglycaspis*) *paludis*

Moore 1964, pp. 224-225, Text-fig. 16.

Claspers & Aedeagus: Not known.
Host Plant: *Melaleuca quinquenervia.*
Type Locality: Palm Beach, Qld.
Other Specimens Examined: (in alcohol) 1♀ "2 mi. S. Tweed Heads, N.S.W., 11 iv 1966, *M. quinquenervia*".
Notes: The species appears to be near *G.* (*B.*) *devicola,* sp. nov., and may be separated on the coloration of the forewings of ♀ specimens (Text-fig. 138).

Glycaspis (*Boreioglycaspis*) *devicola,* sp. nov.

(L. *devius* = lonely, out of the way; *-icola* = an inhabitant)

General Colour: Cream to orange with extensive dark markings.
Claspers & Aedeagus: As in Text-fig. 125.
Length of Aedeagus: (5 specimens) Distal: 0.065 mm. to 0.074 mm. Proximal: 0.133 mm. to 0.153 mm. Total Length, 0.205 mm. to 0.227 mm.
Host Plant: *Melaleuca viridiflora* Sol. ex Gaertn.
Type Locality: 17 mi. SW. East Alligator Riv. Crossing, N.T.
Types: Holotype male on slide labelled "17 mi. SW. E. Alligator Riv., N.T., 24 vi 1966, *M. ?viridiflora*". Paratypes: (slides) 2♂s with same label data; 1♂ "Hell's Gate, N.T., 19 vi 1966, *M. viridiflora*"; 1♂ "15 mi. S. Darwin, N.T., 3 vii 1966, *M. ?viridiflora*". (In alcohol) 1♀ "Mt. Surprise, Qld., 22 v 1966, *M. ?viridiflora*"; 4♂s 6♀s "Cooinda, N.T., 23 vi 1966, *M. viridiflora*"; 1♀ with same label data; 2♂s 3♀s "17 mi. SW. E. Alligator Riv., N.T., 24 vi 1966, *M. ?viridiflora*"; 2♂s 3♀s "0.5 mi. S. Howard Spgs., N.T., 3 vii 1966, *M. ?viridiflora*".
Notes: The more extensive dark coloration on the wing (Text-fig. 139), together with the host association, serve to separate this species from *G. paludis.*

Glycaspis (*Boreioglycaspis*) *denigrata,* sp. nov.

(L. *denigratus* = blackened)

General Colour: Yellow, with variable dark markings.
Claspers & Aedeagus: As in Text-fig. 126.
Length of Aedeagus: (2 specimens) Distal: 0.074 mm. to 0.117 mm. Proximal: 0.077 mm. to 0.119 mm. Total Length, 0.191 mm. to 0.196 mm.
Host Plant: *Melaleuca acacioides* F. Muell.
Type Locality: 33 mi. W. Croydon, Qld.
Types: Holotype male on slide labelled "33 mi. W. Croydon, Qld., 25 v 1966, *M. acacioides*". Paratypes: (slide) 1♂ with same label data. (in alcohol) 1♂ 16♀s with same label data.

Glycaspis (*Boreioglycaspis*) *devexa,* sp. nov.

(L. *devexus* = sloping. Referring to the genal processes)

General Colour: Orange to yellow, sometimes with faint dark marks.
Claspers & Aedeagus: As in Text-fig. 127.
Length of Aedeagus: (7 specimens) Distal: 0.072 mm. to 0.086 mm. Proximal: 0.128 mm. to 0.149 mm. Total Length, 0.200 mm. to 0.234 mm.
Host Plants: *Melaleuca leucadendron; M. cajuputi* Powell.

Type Locality: 6 mi. S. Quamby, Qld.
Types: Holotype male on slide labelled "6 mi. S. Quamby, Qld., 30 v 1966, *M. leucadendron*". Paratypes: (slides) 1♂ with same label data; 1♂ "Einasleigh Riv., Qld., 22 v 1966, *M. leucadendron*"; 2♂s "Mt. Surprise, Qld., 22 v 1966, *M. leucadendron*"; 2♂s "Warlock Ponds, N.T., 15 vi 1966, *M. cajuputi*". (in alcohol) 5♀s "Ellis Beach, Qld., 12 v 1966, *M. leucadendron*"; 8♀s "Mt. Surprise, Qld., 22 v 1966, *M. leucadendron*"; 2♀s "Einasleigh Riv., Qld., 22 v 1966, *M. leucadendron*"; 2♂s 11♀s "6 mi. S. Quamby, Qld., 30 v 1966, *M. leucadendron*"; 1♂ 13♀s "Warlock Ponds, N.T., 15 vi 1966, *M. cajuputi*"; 3♀s 1 nymph "Mataranka Spgs., N.T., 20 vi 1966, *M. cajuputi*".
Notes: Absence of black marks on the anterior and median femora, and the semi-vertical genal processes, serve to distinguish this species from *G. melaleucae*.

Glycaspis (*Boreioglycaspis*) *muminae*, sp. nov.

(*Mumina* = the Mother Goddess or Fertility Mother Cult practised by the Aborigines between the Roper River and the Victoria River, Northern Territory. The Goddess was regarded as causing natural species to appear).

General Colour: White and orange, strongly marked with brown to black.
Claspers & Aedeagus: As in Text-fig. 128.
Length of Aedeagus: (4 specimens) Distal: 0.074 mm. to 0.079 mm. Proximal: 0.122 mm. to 0.131 mm. Total Length, 0.198 mm. to 0.207 mm.
Host Plant: *Melaleuca viridiflora*.
Type Locality: 28 mi. N. Road Junction (Camooweal-Darwin) Nthn. Territory.
Types: Holotype male on slide labelled "28 mi. N. Road Jcn., N.T., 12 vi 1966, *M. viridiflora*". Paratypes: (slides) 1♂ 1♀ with same label data; 2♂s "Roper Valley HS., N.T., 19 vi 1966, *M. viridiflora*". (in alcohol) 1♂ 3♀s "79 mi. W. Croydon, Qld., 25 v 1966, *M. viridiflora*"; 1♂ 3♀s "32 mi. W. Soudan, N.T., 10 vi 1966, *M. viridiflora*"; 2♀s "Hell's Gate, N.T., (Roper Riv.), 19 vi 1966, *M. viridiflora*".

Glycaspis (*Boreioglycaspis*) *abudicola*, sp. nov.

(L. *ab-* = away from; *udus* = wet, moist; *-icola* = an inhabitant)

General Colour: Pale yellow to orange, lightly marked black, sometimes lightly suffused red.
Claspers & Aedeagus: As in Text-fig. 129.
Length of Aedeagus: (3 specimens) Distal: 0.086 mm. to 0.090 mm. Proximal: 0.131 mm. to 0.146 mm. Total Length, 0.221 mm. to 0.236 mm.
Host Plant: *Melaleuca nervosa*.
Type Locality: 30 mi. W. Duaringa, Qld.
Types: Holotype male on slide labelled "30 mi. W. Duaringa, Qld., 29 iv 1966, *M. nervosa*". Paratypes: (slides) 2♂s with same label data. (in alcohol) 2♀s "90 mi. N. Clermont, Qld., 2 v 1966, *M. nervosa*"; 2♂s "32 mi. SW. Mt. Garnet, Qld., 21 v 1966, *M. nervosa*"; 7♂s 14♀s "30 mi. W. Duaringa, Qld., 29 iv 1966, *M. nervosa*".
Notes: The genal processes of this species, and those of *G. muminae*, are more noticeably depressed (being vertical) than those of any other known *Glycaspis* species.

Glycaspis (*Boreioglycaspis*) *australiensis*

Moore 1964, pp. 225-6, Text-figs. 10, 11, 17.

General Colour: Cream to yellow, with brown to black markings. On female highland specimens, the dark coloration on the forewing forms a black transverse band, along the stem of M+Cu.
Claspers & Aedeagus: As in Text-fig. 130.
Length of Aedeagus: (3 specimens) Distal: 0.099 mm. to 0.104 mm. Proximal: 0.171 mm. to 0.191 mm. Total Length, 0.270 mm. to 0.293 mm.
Host Plant: *Tristania conferta* R.Br. (brush box)
Type Locality: Coolangatta, on the N.S.W.-Queensland border.

Types: Holotype female in BP; paratypes in BP and AM.
Specimens Examined: (slides) 3 ♂s "Mt. Archer summit, Rockhampton, Qld., 28 iv 1966, *T. conferta*". (in alcohol) 4 ♂s 15 ♀s and 1 ♂ genitalia, with same label data; 1 ♀ "Mt. Hypipame (crater edge), Qld., 9 v 1966, *T. conferta*". (dried) 1 ♂ "36 mi. W. Woodenbong, N.S.W., 30 ix 1954, K. L. Taylor".
Notes: No lerps or flocculence appear to be formed by this species. A forewing is illustrated in Text-fig. 140.

Glycaspis (Boreioglycaspis) borneensis

Moore 1964, p. 227, Text-fig. 19.

General Colour: Yellow.
Claspers & Aedeagus: Not known.
Host Plant: Not known.
Type Locality: North Borneo.
Types: Holotype female in BP.
Other Specimens Examined: 2 ♀s "British N. Borneo, Tenompok, 15 ii 1959, T. C. Maa, Collector, BISHOP", to OM.
Notes: The general coloration, and wing-shape and venation, suggest that these two specimens belong to this species, but until the males are studied there necessarily is some doubt. Forewing as in Text-fig. 141.

Glycaspis (Boreioglycaspis) polymelasma

Moore 1964, pp. 225-6, Text-fig. 18.

General Colour: Yellow and black.
Claspers & Aedeagus: Not known.
Host Plant: Not known.
Type Locality: North Borneo.
Types: Holotype female in BP.
Note: No further specimens were examined. Forewing as in Text-fig. 142.

Glycaspis (Boreioglycaspis) penangensis

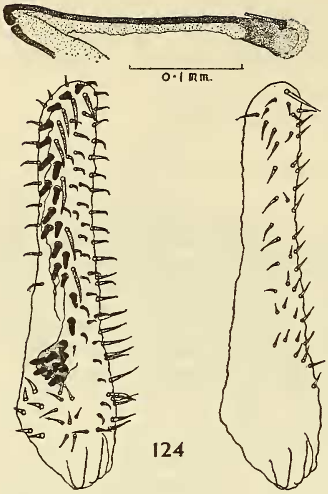
Moore 1964, p. 227, Text-figs. 20-22.

General Colour: Yellow.
Claspers & Aedeagus: Not known.
Host Plant: Not known.
Type Locality: Penang Island.
Types: Holotype female in BP.
Note: No further specimens were examined. Forewing as in Text-fig. 143.

Glycaspis (Boreioglycaspis) forcipata (Crawford)

Epipsylla forcipata Crawford 1917, pp. 167-8, fig. 2.
Glycaspis (Boreioglycaspis) forcipata: Moore 1964, pp. 226-230. Text-figs. 13, 23, 24, 26.
General Colour: Yellow sometimes marked with brown.
Claspers & Aedeagus: As in Text-fig. 131.
Length of Aedeagus: (2 specimens) Total Lengths, 0.315 mm., 0.331 mm.
Host Plant: Not known.
Type Locality: Palawan Id., Philippine Is.
Types: Lectotype in UM, Paralectotypes in UM. Other specimens in BP, AM.
Notes: No further specimens were examined. Forewing as in Text-fig. 144.

Fig. 124. Claspers & aedeagus of *Glycaspis* (*Boreioglycaspis*) *melaleucae.*
Fig. 125. Claspers & aedeagus of *Glycaspis* (*Boreioglycaspis*) *devicola,* sp. nov.
Fig. 126. Claspers & aedeagus of *Glycaspis* (*Boreioglycaspis*) *denigrata,* sp. nov.
Fig. 127. Claspers & aedeagus of *Glycaspis* (*Boreioglycaspis*) *devexa,* sp. nov.
Fig. 128. Claspers & aedeagus of *Glycaspis* (*Boreioglycaspis*) *muminae,* sp. nov.
Fig. 129. Claspers & aedeagus of *Glycaspis* (*Boreioglycaspis*) *abudicola,* sp. nov.
Fig. 130. Claspers & aedeagus of *Glycaspis* (*Boreioglycaspis*) *australiensis.*
Fig. 131. Claspers & aedeagus of *Glycaspis* (*Boreioglycaspis*) *forcipata.*
Fig. 132. Colour pattern on Scutum of some ♀s of *Glycaspis* (*Glycaspis*) *retrusa,* sp. nov.
Fig. 133. Forewing of ♂ *Glycaspis* (*Glycaspis*) *flavilabris.*
Fig. 134. Forewing of ♂ of *Glycaspis* (*Glycaspis*) *egregia,* sp. nov.
Fig. 135. Forewing of ♂ of *Glycaspis* (*Glycaspis*) *felicitaris,* sp. nov.
Fig. 136. Forewing of *Glycaspis* (*Glycaspis*) *emphanes,* sp. nov.
Fig. 137. Forewing of *Glycaspis* (*Boreioglycaspis*) *melaleucae.*
Fig. 138. Forewing of ♀ of *Glycaspis* (*Boreioglycaspis*) *paludis.*
Fig. 139. Forewing of *Glycaspis* (*Boreioglycaspis*) *devicola,* sp. nov.
Fig. 140. Forewing of *Glycaspis* (*Boreioglycaspis*) *australiensis.*
Fig. 141. Forewing of *Glycaspis* (*Boreioglycaspis*) *borneensis.*
Fig. 142. Forewing of *Glycaspis* (*Boreioglycaspis*) *polymelasma.*
Fig. 143. Forewing of *Glycaspis* (*Boreioglycaspis*) *penangensis.*
Fig. 144. Forewing of *Glycaspis* (*Boreioglycaspis*) *forcipata.*



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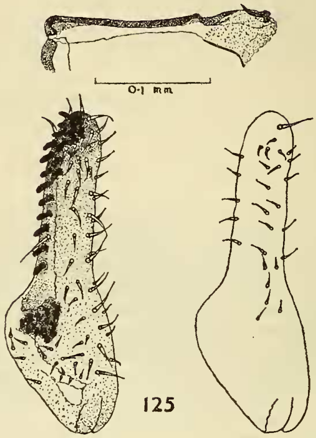

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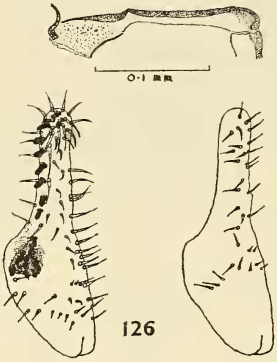

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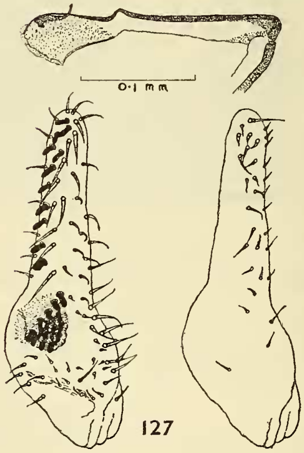

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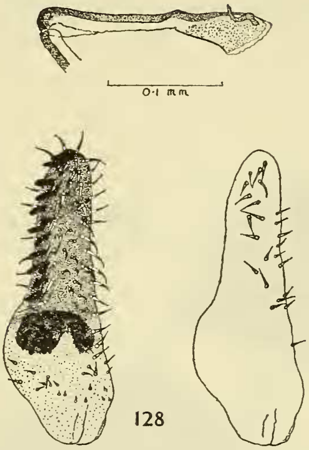

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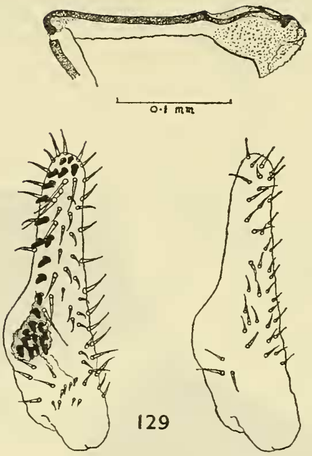

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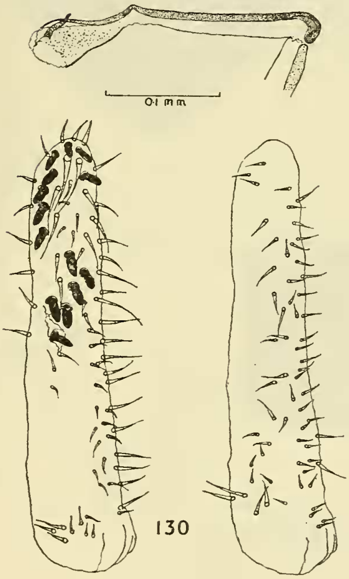

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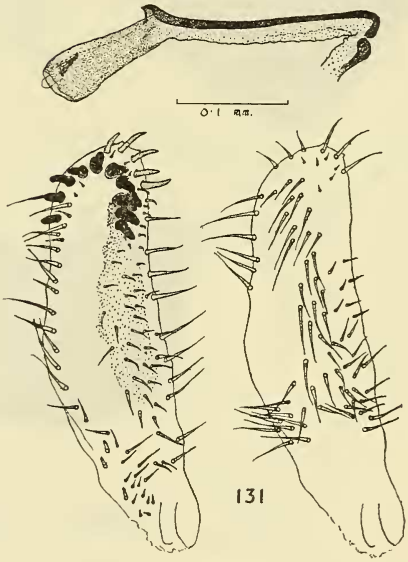

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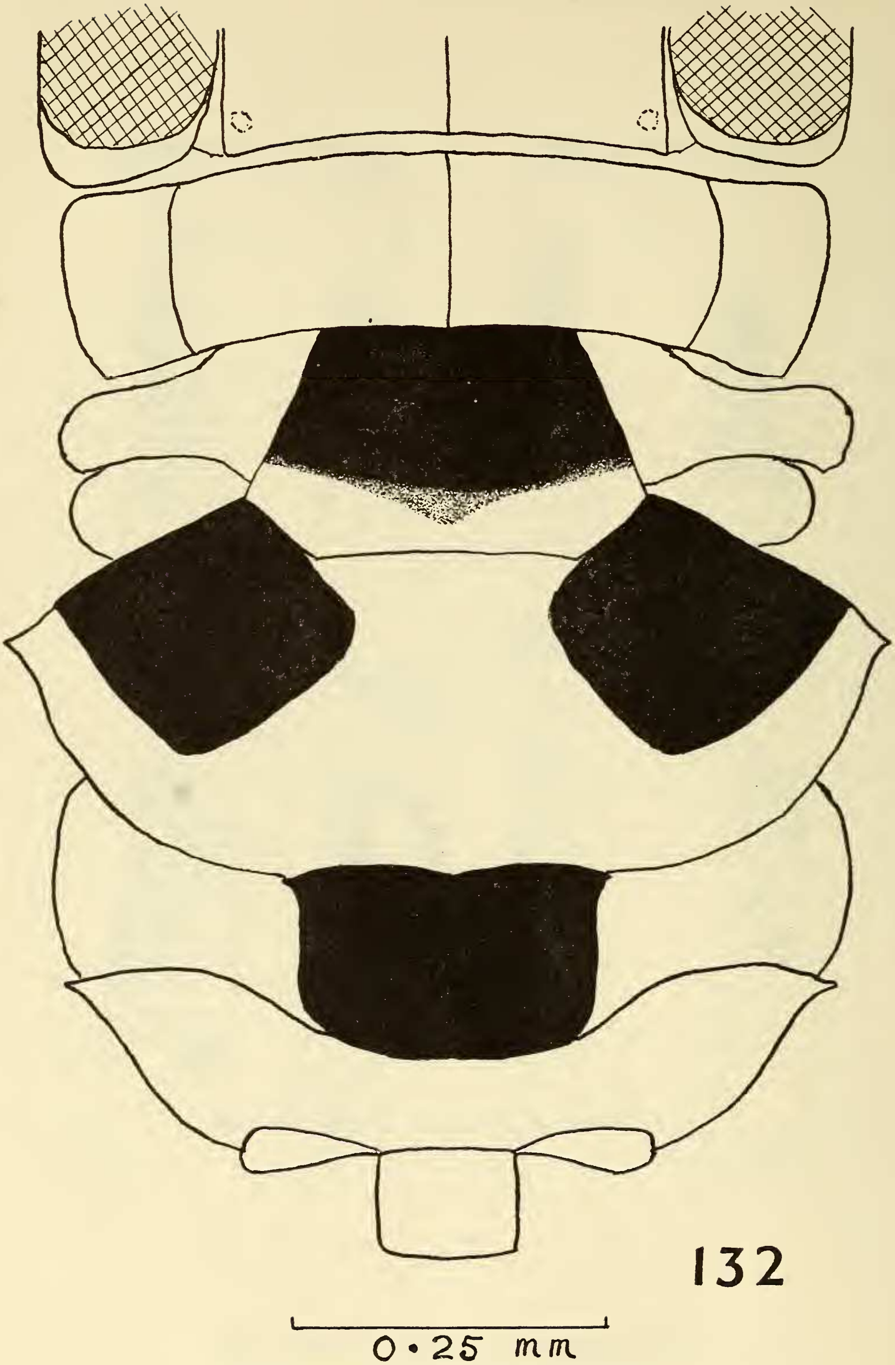

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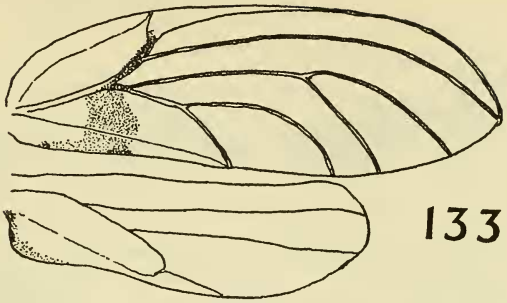

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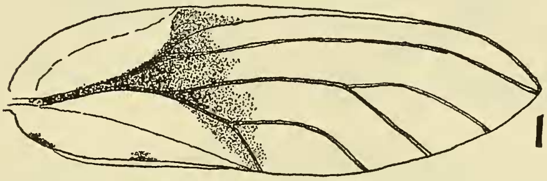

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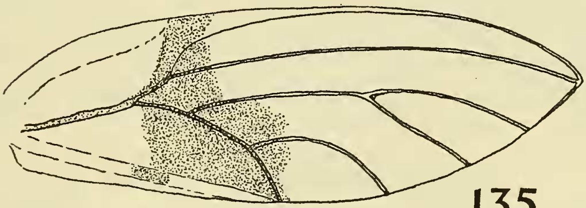

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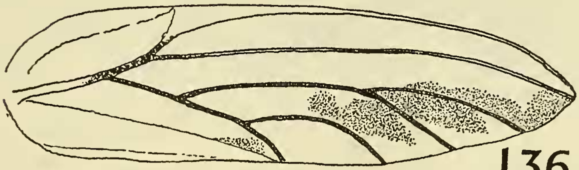

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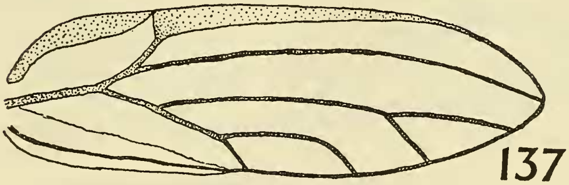

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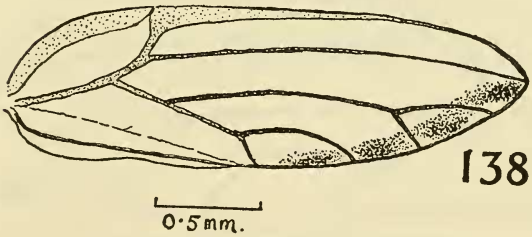

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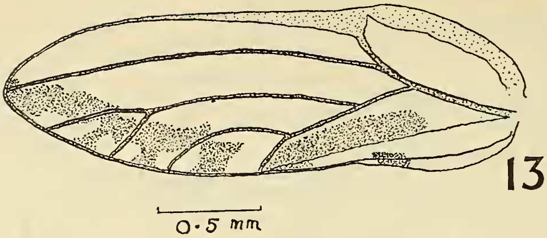

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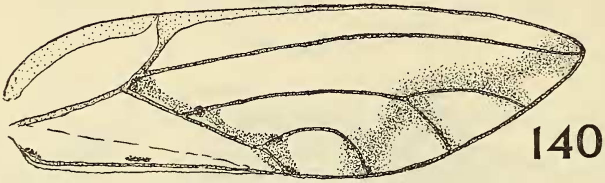

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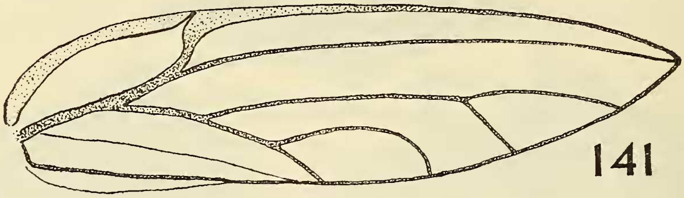

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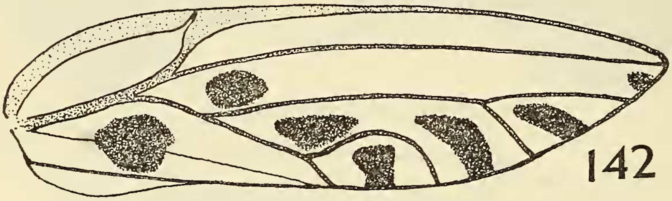

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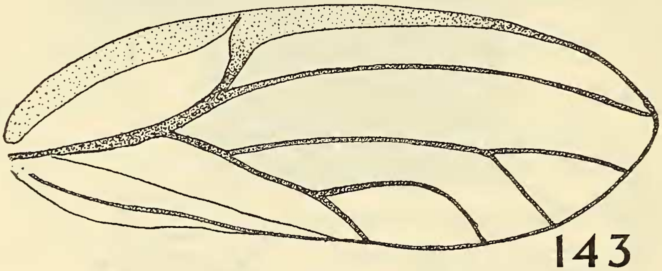

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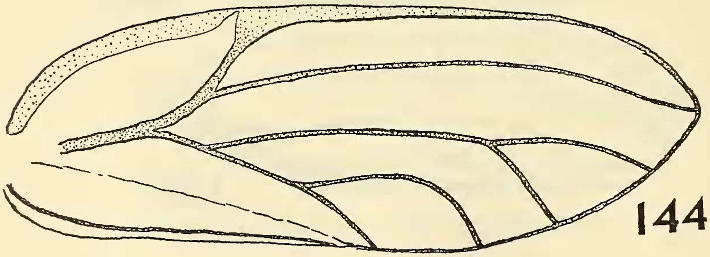

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LIST OF SYNONYMS

Subgenus *Alloglycaspis,* Moore 1961, = Subgenus *Glycaspis* Moore 1961.

Glycaspis (*Alloglycaspis*) *mirabilis,* Moore 1961, = *Glycaspis* (*Glycaspis*) *granulata* (Froggatt) 1901.

Glycaspis (*Alloglycaspis*) *ochros,* Moore 1964, = *Glycaspis* (*Glycaspis*) *mesicola* Moore 1964.

Glycaspis (*Alloglycaspis*) *convallaria,* Moore 1961, = *Glycaspis* (*Glycaspis*) *locaridensis* Moore 1961.

Glycaspis (*Alloglycaspis*) *vellerosa,* Moore 1961, = *Glycaspis* (*Glycaspis*) *mannifera* (Froggatt) 1900.

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